CALIFORNIA ENERGY COMMISSION

GUIDANCE TO THE CALIFORNIA CLIMATE ACTION REGISTRY

WORKSHOP

CALIFORNIA ENERGY COMMISSION
1516 NINTH STREET
HEARING ROOM B
SACRAMENTO, CALIFORNIA

THURSDAY, MAY 27, 2004
10:05 A.M.

Reported by:
Alan Meade
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STAFF PRESENT

Susan Brown, Workshop Moderator

Lisa DeCarlo, Staff Counsel, Energy Commission

Jeff Wilson, Climate Change Program, California Energy Commission

ALSO PRESENT

Andrea Tuttle, Director, California Department of Forestry and Fire Protection

Diane Wittenberg, President, California Climate Action Registry

Michelle Passero, Policy Director, Pacific Forest Trust

Suzie Greenhaugh, World Resources Institute

Ken Andraski, Environmental Protection Agency

Doug Wickizer, California Department of Forestry and Fire Protection

Terry Collins, Collins Pine Company

Jeff Fieldler, NRDC

Ellen Hawes, Nature Conservancy

John Nickerson, Mendocino Redwood Company

Don Justin Jones, COPEC

Maurice Roos

Patrick Quinn, Principle Investigator

Bob Prolman, Director, Weyerhaeuser

Robert Jones, Ecolinx Foundation

I N D E X

P R O C E E D I N G S

10:00 a.m.

MODERATOR BROWN: Thank you all for coming. My name is Susan Brown, and I manage the Transportation Technology Group at the California Energy Commission.

A few months ago I was given oversight responsibilities for climate change, which is a huge undertaking as you might imagine. So, I am very pleased to have everyone here today.

A few housekeeping items first. We are recording this workshop, so I'm going to ask anyone that speaks to first sign up in the back. There's a sign up sheet because we will be preparing a transcript of this workshop. If you do speak, would you please identify yourself for the record by name and affiliations, so that the court reporter can record your comments.

If you have business cards, I think he would really appreciate having those in advance. That is it for the preliminaries.

I believe the purpose of today's workshop is to solicit public comments and have some public consultation on proposed forestry protocols.

These protocols were developed for a forest work group which was convened by the California Climate Action Registry. It has been meeting for I believe over a year, and the product you have is I believe over 200 pages long. It is very comprehensive, but I think we would all agree it is still considered a work in progress.

Protocols are not easy to write. They are actually not rules, they are guidelines that can be used to estimate, calculate, and report greenhouse gas emissions from forestry projects.

I think today we would like to get as much interaction going as we can. I would like to run this rather informally, but again, with the court reporter, you will have to identify yourself for the record when you speak.

We did notice this workshop by a notice that was released by the Energy Commission, and I want to make a few comments about the process. We are holding the record open until June 3, which I believe is a Thursday to obtain additional written comments. Following that comment period, the Forestry Work Group will convene and be prepared to address each and everyone of the comments they receive.

Then there will be a revised set of protocols released sometime I believe in mid-June. I will let Diane comment a little bit later on the specifics. I think they are scheduled for a June 24 board meeting here in Sacramento, a meeting of the Registry Board if all goes as planned. Again, consider these to be work in progress until they are actually applied to specific forest projects,

I think our belief is that these rules will continue to change and be updated and approved and refined over time. So, I think that is kind of the gist of the point I wanted to make.

I am going to withhold further comments till later in the meeting. At this time, I am very pleased to introduce Andrea Tuttle, who is the Director of the Department of Forestry in the Resources Agency, and she has a few remarks to make.

MS. TUTTLE: Thanks a lot. I am Andrea Tuttle, for the record, the Director of the California Department of Forestry and Fire Protection.

I think most of the people in the room here are pretty fluent in both the vocabulary and the concepts of forest carbon, but since we didn't

know exactly who was going to be here, I am going to go through just a few basic concepts and principles.

First of all, I very much want to thank the working group for all the work that you have put in. All of you who have met -- raise your hands on the working group. You guys, plus a number of others have been working very hard on technical stuff for the last it is almost two years to get us this far.

My role here is to set the context within which these forest protocols fall and say something about why they are so important to California. Diane Wittenberg is going to speak next and will speak more to what the California Climate Registry is, and Michelle Passero will speak to more of the specifics of the protocols themselves.

I want to set the scene. What we are doing here in proposing these Forest Carbon Protocols is to provide a functional mechanism and a standardized system by which land owners can record or register the storage of carbon on their lands above a business as usual baseline.

There is a second thing that we are

doing here which is also very important to the state, and that is to offer new incentives to land owners to provide additional environmental services on their land that benefit not only the climate but a lot of other environmental goals as well.

These will help incentivize landowners for excellent forest practices, the growing of bigger and older trees, even more retention, end stream buffer corridors and repair end corridors beyond which the Board of Forestry rules require.

It will help provide some incentive for protection of coho. This has been a regulatory area for the Board of Forestry and the Fish and Game Commission for at least five years, and extremely important to me and many others is keeping our forest lands in forest production.

Most Californians don't realize that we think of our forest lands as being out there and they will always be there, but indeed, they are being converted and lost to development at a very high rate. To the extent that we can keep those forest lands in production, we will retain all the environmental benefits that come with it.

The open space values, the wildlife

habitat values, the watershed values, the producing water for domestic use -- most of the water in California comes from forested water sheds, and so this idea of conversion of our forest land is that we need to recognize that as a threat to the forest environment here.

Most of you -- oh, wait a minute, go back. I haven't even started on these. Go back to the beginning. Okay. Most of you are familiar with the global climate cycle and the carbon cycle. What we are talking about here today is this portion that is dealing with the sequestration of carbon.

We have our fossil fuel burners and our cars and our industries that are burning fossil fuels that are producing CO 2, how does it get cycled back? It gets cycled back through the process of photosynthesis.

If you remember your basic chemistry, CO 2 plus water equals sugar, sugar is stored as cellulose and other forms in a tree, and that is the sequestration part.

Now we are ready for the next one. Looking more closely just at that forest part of the forest carbon cycle, this is Birdsey and

Lewis. Many of you are familiar with his work. The growth is the photosynthesis part where the CO2 from the atmosphere is converted into sugars and cellulose which then the trees grows, the vegetation grows, they die, and then you have these various components of where this forest carbon is stored.

The aspects that are treated in the forest protocols are this box, this box, this box, this box, this box, this box, and this one is optional. Okay, the next one please.

I think most of you are aware of some of the impacts of global warming to California. What we are really concerned about through my lens is that portions of the state are predicted to become hotter, drier, and windier. For us, that affects our wildfire regime. It has severe implications for the distribution of our species, our various ecological communities.

As it gets warmer and drier, our communities will move northward and higher in elevation. The question is will those move as intact ecological communities, or will some species move faster than others, which means invasives will play a part, and we will lose the

kind of habitats that we are familiar with in California.

The other piece, of course, that many people are concerned about is the rise in sea level and all the inundation of low lying areas and that sort of things, but that is another story.

Let me come back a little bit to this concept I tried to introduce about the additional environmental services that we benefit from in keeping our forest lands as forest lands and providing this opportunity for forest land owners to register their forest carbon.

California is blessed with some of the best conifer land in the country if not the world. We have good forest soils, we have good forest growing climate, and usually we have sufficient water for our conifers.

We grow conifers more quickly than the cooler areas, the boreal areas. Our trees grow well, but we are threatened by two dominant factors. If I could have the next one. This is not showing very well in color, but you can see the green trees, but every one of those other trees in there is bright orange. Those are dead

trees.

This is the Lake Arrowhead area. This is a car that has been crushed by a falling dead tree. What has happened is that our forests, many of them in California, because of active fire suppression, are now overstocked. We have too many stems per acre. This has come to a head. If any of you are biologists in any way or interested in seeing a natural phenomenon, go to the Lake Arrowhead area and see 400,000 acres of standing dead trees, orange trees as far as the eye can see. Because the trees are overstocked, they out compete each other for water. The ladder fuels have built up, the bark beetles are a natural part of the eco system, and they have a field day.

They have killed the trees. The infestation is spreading. We have just had reports in the Southern Tehachapi's and Southern Sierra, and we expect this to continue.

CDF, as you know, is the premier wildfire fighting agency certainly in this state and ranks very high in the country. From a wildfire protection standpoint, this is a catastrophe waiting to happen.

If ignition starts, if we have an

ignition in these stands, the configuration is going to be "of biblical portions". It is off the scale in terms of our modeling, of our fuel models, and our fire behavior models.

Ninety percent of these dead trees were saved by heroic fire fighting in the October 2003 fire siege, so this is still there ready to happen. We need management in these forests that relates back to our forest protocols.

The first major threat to our forests in California is unhealthy conditions, overstocking, threat of wildfire. Now the next one.

The second one is conversion. This is from our recent TRAP 2004 report, the assessment of forest and range land conditions in California. What this shows is the cause of conversion of forest land since 1969. The red bars are '69 to '78, the yellow are '79 through '88, and the whitish are '89 through '98.

In the early decades of 1970, the primary cause of conversion of forest land was converting it to grazing land, just cutting it back. This is historical from the 1880's, ranchers wanted to get rid of the trees to get more grazing land. This has been the traditional

cause of lost of forest land is due to grazing.

This is other agriculture, mining, water development, recreation, and other. Look at what has happened here. The last two decades, this is subdivision. That is the primary cause of the loss of our forest land.

As director of the department, there are certain things that come to my desk. The most disliked job I have, other than dealing with the tragedies of fire fighter injuries and fatalities, is to sign the conversion permits to take forest land out of forest production. A certain class of land conversions come to my desk and need a director's signature.

The even bigger class of conversions do not come to my desk, they just happen. Landowners are able to roll their land out of timber production zone simply by notifying the tax assessor and over a ten year period it simply rolls out of that zoning. This is occurring.

We do monitoring of land use changes with the forest service on five year increments rolling through the state, and you can see this. The entire front face of the Sierra is being fragmented. Those big blocks of forest lands that

we like is being chopped up and parcelized. Come down into the Tehachapi's down across San Luis Obispo, Ventura, Santa Barbara, Santa Cruz, and Monterey, those redwood forests are in small parcels.

Come on up in Marin County, Sonoma, Napa, Mendocino, Humboldt County, and the fragmentation is occurring throughout the state. The economic pressure to subdivide and develop your forest land is tremendous.

It is very hard to be a timber land manager in California today because of the economic incentive to convert. To the extent that we can provide incentives, and that is what this additional environmental benefit of these forest protocols is, to the extent we can do that, we can help protect our forests.

As to the protocols, all of the basic questions that were raised by Kyoto and (indiscernible) have been addressed: baselines, additionality, leakage, and permanence.

On the baseline question, what distinguishes California from so many other states and countries is that we have a very highly prescriptive nature to our forest practice rules,

acts and rules. The floor that we set for allowable baseline behavior is a good floor.

You can go to the Board of Forestry and argue about that. It is a different forum where we talk about what that floor is, but it is a good one, and it is more quantifiable than most other BMP type approaches that you have in other states and other countries.

We require land owners of 50,000 acres or more to demonstrate to us that they are on long-term sustained yield. Our clear cuts are only 20 acres, the adjacent piece can't be entered for so long and has to be so big. We have road standards, culverts, watershed protection, spotted owl, Marbled Murrelet, protection of archaeology sites and so on. We have numerical retention requirements for trees and the buffers and so on.

The point is that the rules set a quantifiable floor that California can't take advantage of. Some landowners have personal objectives to operate their lands above that floor, and that is what we want to award through these protocols. I'm almost done here.

The key concepts of these protocols are that it provides for managed forests, not just

preservation forests, that is different from many of the acquisition projects that we've seen elsewhere. It requires additionality above business as usual. It requires that we deal with natural forests, our natural forests species, not introduced plantation species.

It requires permanence in that we require a conservation easement keeping that land. If you are going to get the benefit of registering your good behavior, you need to insure that you are going to keep that land as forest land through the conservation easement. We have third party verification, and we have entity wide and project accommodation.

I've read some of the early comment letters that came in. There were issues that were raised are also the ones that the work group has dealt with. I believe that the group has come to a very equitable and common sense position on those issues. I want to reiterate the point that with these protocols we are not creating new forestry regulation. If you want to do that, go over to the Board of Forestry.

We are creating a voluntary reporting structure. If a credit market ever develops, the

value of California forest carbon will be reflected in the market price, and if it is registered in this registry, it will be a very high quality.

I predict a real market premium because of these other environmental services that will be provided by California forest carbon because our registry is so well constructed and because of these additional environmental services.

My last slide I have been using this phrase "California has charismatic carbon". When we go into the market, if and when markets for these credits evolve, you will be able to say not only I am an admitting CO2 producer, I'm not only balancing my two emissions by sequestering carbon, but I am also protecting salmon, big old trees, beautiful forests, water sheds, and all of that. That will have a market premium.

Thanks again to the work group for all the hard work you've put in to this. I look forward to the conversation today, and I certainly encourage adoption of the protocols. Thank you.

MODERATOR BROWN: Any questions before she steps away?

(No response.)

MODERATOR BROWN: Anyone on the phone?

(No response.)

MODERATOR BROWN: Thank you very much, Andrea. Are you planning to stay with us then for a good part of the day?

MS. TUTTLE: Yes.

MODERATOR BROWN: Great, wonderful, thank you very much. I failed to note that there are copies of the agenda available at the front and also the protocols. So, again, for those of you that came in late, I am Susan Brown. If you wish to speak, please come to the microphone and identify yourself for the record. That way we can get a complete record of this workshop.

No questions. You got off easy. Thank you.

At this time, I would like to identify Diane Wittenberg and offer her time to make a few comments.

MS. WITTENBERG: Thanks, Susan. I am Diane Wittenberg, President of the California Climate Action Registry. I'm really here to speak just a minute or two to offer some context and repeat already this morning a few things that Susan and Andrea said.

The California Climate Action Registry is not a state agency, it is a voluntary registry whose goal is to encourage early action to reduce greenhouse gases and to develop measurements for greenhouse gas emissions and reductions that can stand the test of time and can be protected if they are in the registry in any future regulatory regimes.

In that sense, we are not a regulatory agency, we cannot turn reductions into credits. We can't say whether the state will or the federal government will. We are just trying to account for what happens out there and make sure that it is accurately recorded.

This forestry protocol really breaks a lot of new ground, and I want to really say thanks to the work group as well. It also included Jill Gravender of the Registry who couldn't be here today when the date got changed, she couldn't change her plans. So, I'm here as her proxy, but she is the expert and the one who has done all the work from the registry perspective.

The new fronts -- I think this is really the first comprehensive forest protocol that also goes into projects of forest management,

reforestation, and conservation. Those were really hard topics just from a process point of view. The work group spent, I don't know, hundreds of hours over the last year thinking through these issues, talking to their peers.

We did a round of expert reviewers when we thought we had it as right as we could get it, and those expert reviewers came in with a lot more comments that were very valuable and were right on, and we are expecting interesting comments from you all here today.

We've gotten written comments, we will talk to all the people that will submit comments. We will listen closely today. As Susan said, the work group will take all that back, and then you will hear the next step. Thanks to all of you for coming, and we are looking forward to the results of today and what you all have to say.

I guess -- should I just turn it over to Michelle?

MODERATOR BROWN: Absolutely.

MS. WITTENBERG: Michelle Passero of the Pacific Forest Trust led the work group, and she is going to walk through the protocols as they stand today. Michelle.

MS. PASSERO: You will have to bear with me for one moment till I get -- I want to make sure I do this right. I'm not technically savvy.

Can you hear me through the microphone too? All right. Just for the record, my name is Michelle Passero. I am Policy Director for the Pacific Forest Trust.

I appreciate the introductory comments both by Director Tuttle and Diane Wittenberg. I think that they set a great context when we contemplate these protocols and as I walk through them with you.

I think a point worth reiterating is what exactly is happening with forest land here in California. California loses on average 60,000 acres of forest land each year to non-forest uses. This rate of conversion is increasing.

With this conversion is a loss of existing climate benefits that forests provide as well as any future additional benefits that forests may be able to provide, not to mention all of the other attendant and environmental benefits that forests provide, including bio-diversity, species habitat, and water quality. Please keep that in mind as we walk through these protocols.

As was mentioned earlier, there has been a work group developing these protocols for over a year now. The stakeholder work group includes Pacific Forest Trust, the California Energy Commission, California Department of Forestry, Winrock International, The Nature Conservancy -- who else am I forgetting?

UNIDENTIFIED VOICE: Mendocino Redwood Company.

MS. PASSERO: Oh, Mendocino Redwood Company, sorry. I think -- California Department of Forestry. There are eight members total. It is worth noting that it has been a voluntary effort. A lot of work has been put into this, and it has been voluntary time. The drafts did go through an expert review process. The expert reviewers are comprised of a larger group of people.

The intent was to get a variety of expertise at the federal level, at the state level, regional levels, people with climate expertise as well as forestry expertise, people reflecting smaller landowners, large landowners, etc. to get the breadth of perspective that may be out there with regards to these protocols.

We are currently going through the public review process, and this public workshop is a piece of that. We are happy to do that, and we are looking forward to receiving feedback on these protocols. Assuming everything goes on track, then we will present these protocols to the registry boards to be considered for adoption.

Over the summer then, there would be an on-line mechanism created for reporting on line. This tool is called CARROT, Climate Action Registries Reporting Online Tool.

I think worth also mentioning the context which was referred to early, the policy context within which we developed these protocols. Senate Bill 812 under the leadership of Senator Sher, was also sponsored by the Pacific Forest Trust. What amended the existing climate registry legislation to include a framework for forest accounting.

As mentioned earlier, the intent behind that was to create an incentive for forest landowners to keep their forests in forests and the climate benefits that they provide, and to encourage forest landowners to do more and create more climate benefits from their forests.

The older legislation that created the registry includes Senate Bills 1771 and the clean up legislation 527. So, we also worked within the broader existing legislative framework, and then we also had existing registry policy. The registry has already created a general reporting protocol for sectors with a focus on what we call non-biological emissions, emissions that are not directly linked to bio mass per say. An example may be fossil fuel combustion.

We also worked within the existing general certification guidance that the registry has already developed.

We did produce four draft recommendations: forest entity reporting guidance -- this forest entity reporting guidance is an appendix in the existing general reporting protocol. We also produced recommendations for forest project reporting with a focus on three projects in particular: conservation based forest management, reforestation projects, and conservation projects. I will be explaining what exactly these projects are a little bit later.

The focus on these three were the direct result of SB 812. These projects were identified

in the legislation.

We also produced draft protocol recommendations for the certification of both entity reporting as well as project level reporting, and this is to give guidance to third party certifiers.

I will start with the Forest Entity Reporting Protocol. As I did mention, it is an appendix to the general reporting protocol.

A forest entity is defined as a legal entity or an individual who owns more than 100 acres of trees. The purpose of reporting at the entity level would be to track changes in carbon stocks and any related carbon dioxide emissions over time.

Once we start to work on the appendix, the Forest Entity Reporting Protocol, we realized that we did need to make a distinction between biological emissions and non-biological emissions. The non-biological emissions are covered in the existing general reporting protocol, the forest sector introduced the notion of reporting emissions that are related directly to forest biomass, and therefore, to make the distinction, we do call them biological carbon stocks and

biological emissions, meaning carbon stocks that are in the trees and any related carbon dioxide emissions that are directly related again to the forest biomass.

If you are a forest entity reporting at the entity level, you will have two documents to follow for guidance. If you are a non-biological emissions, you will be using the existing general reporting protocol, but for your forest carbon stocks and related carbon dioxide emissions, you will refer to the appendix of the General Reporting Protocol, which is what we developed, the Forest Entity Reporting Protocol what we are calling throughout. That will be the focus in this presentation when I refer to the Forest Entity Protocol.

There are geographical boundaries. This evolved from the General Reporting Protocol. At the entity level, you will be reporting or an entity would be reporting for California only, or they will report nation-wide, the one caveat being that any level of reporting within California will be certified. Any reporting that is outside of California at this time would not be certified by the registry. This evolves from Senate Bill 812,

which intended to focus right now on California.

The reporting responsibility is assigned to the owner of the commercial and non-commercial trees where the carbon is contained. Consistent with the General Reporting Protocol, an entity baseline is optional for forest entities, so a forest entity can choose to establish a baseline within the registry. Otherwise, if they choose not to, they would simply report on a year-to-year basis.

If a forest entity chooses to establish a baseline, there are two pieces to this, or two steps to it. One is more qualitative in nature, where the entity would do a characterization of their baseline, which in effect, is sort of a characterization of the practices over the next 100 years. So, it would be a projection. The 100 year time period is something that many forest managers are accustomed to as they do this with their forest management plans, sort of consistent with existing practices here in California.

The second component to an entity baseline would actually be the quantification of this baseline in terms of carbon. Your characterization sort of lays the foundation for

how the carbon stocks would be quantified pursuant to that characterization.

There are identified required carbon pools that an entity would then seek to measure for their forests. The carbon pools, if you are familiar with the general reporting protocol, are very similar to what we would call operational boundaries. That is, identifying or the categories from which there are potential sources of emissions in terms of forests, those categories would be carbon pools.

There are live biomass carbon pools as well as dead biomass carbon pools. The live pools and the ones that are required for reporting are the tree bole or the trunk, the branches, leaves, and roots. The dead biomass would be standing and lying dead wood as well as wood products. We did draw this distinction between required and what we have also identified as optional pools as the registry existing policy is that required pools are certified and optional pools are not certified.

We did draw a line in the sand to focus on the carbon pools that are most likely to change over the shortest periods of time. We also kept

in mind or tried to walk that balance of how expensive it would be in requiring the measurement of pools.

To reiterate then, the required pools are the trunk, branches, leaves, roots, and dead biomass. The required dead pools would be the standing and lying dead wood as well as wood products.

Emissions at the forest entity level would be quantified as decreases in carbon stocks over time. As I mentioned before, there is annual reporting, and if your total carbon stocks that are reported from year to year show a decline, that would be deemed an emission. This is often known as a stock change accounting approach.

Reductions, emission reductions, are not for the purposes of the registry, are not achieved at the entity level per say unless you are doing a reduction project pursuant to the project protocol. This is also an extension of SB 812, a requirement of SB 812.

There is a little more background on the quantification component of forest carbon stocks. If you choose to do a baseline, you are going to do a quantification of that baseline. It will be

based on an inventory that an entity must undertake. If you choose to do just annual reporting without the baseline, this is the quantification procedure that you would also use.

We have set up minimum confidence standards in order for an entity to report in the protocol, and we have also set up standards for what an inventory must include. This would be provided to the third-party certifier. A forest entity would need to identify and explain its sampling methodology. Within that, there are certain standards that are provided within the entity protocol to promote consistency, standardization and a certain level of accuracy and precision.

In order to do estimates of your carbon stocks, you will need to set up inventory plots. One of the guidelines is that the plots must be ten years old or younger. There also needs to be a description of the stratification system that is used to create these estimates as well as an explanation of the analytical methods used to translate all of your field measurements to volume and/or biomass.

As a bit of background, many of you may

be aware of this and some may not, but when an entity will be reporting, and this is sort of consistent generally with reporting or anticipating forest growth, you do a combination of direct sampling and field measurements in addition to using models for projections.

Direct sampling is -- both are required within the protocol, and we've tried to strike a balance then with how the two would be done. You would have direct sampling, and 100 percent of the direct sampling would have to be completed within a ten year period, but also you would be able to use models and to report in interim years.

The direct sampling would be a check against your modeling, (indiscernible) come up with your modeling. That is consistent with current practices with how forest managers actually do projections for their forest and the forest inventory.

I'll explain the Forest Project Protocol now. It is defined as a planned set of activities that removes, reduces, or prevents carbon dioxide emissions in the atmosphere by conserving and/or increasing on-site forest carbon stocks.

This is consistent with the intent of SB

812. An ultimate purpose, then, what we sought to achieve with these protocols is to provide guidance on the measurement and monitoring of greenhouse gas reductions that result from a specific forest activities, but more specifically, three types of forest projects: reforestation, conservation-based management, and conservation.

Reforestation is the restoration of native forest cover on areas that have once been in forest cover but have been out of forest cover for a minimum time frame of ten years.

Conservation-based forest management is where commercial harvest and regeneration still takes place, but it is done at a conservation based level at a higher level than the baseline.

Conservation projects are defined as the prevention of conversion to non-forest use. The non-forest use may be agriculture or commercial development. Those are examples.

Pursuant to SB 812, these projects must be done in California only at the time. That is where they would be certified.

Similar to what I covered in the entity level reporting, there is a baseline characterization. It is optional at the entity

level, however, at the project level it is required. There should be some acknowledgement that oftentimes there is a lot of discussion of what is a proper baseline. We struck a balance in keeping with the intent of SB 812 in developing these baselines and trying to create an incentive for forest landowners to keep their forests as forests and to do more.

With reforestation -- actually, I'll back up. There are two components to the baseline again, similar to the entity level where you do sort of a qualitative part of that where you do a characterization, but then there is also a quantitative part where we actually quantify it in terms of carbon. This slide actually addresses the characterization piece.

With reforestation, I had mentioned the definition where it has at a forest cover for a period of ten years. The project -- I'll use the term project developer or forest entity, but meaning the person who is actually implementing the project, they would characterize the reforestation baseline by describing the practices that would be anticipated on the forest land over time out into the future.

Something that would be consistent with the reason why it has been out of forest cover for a period of ten years. The presumption is that it would stay out of forest cover for ten years.

There are other criteria within the project protocol that help make the case for this type of project, but I will just hit the main points.

One of the other pieces, though, that they would have to prove is that there is no law that actually requires you to reforest that area as well.

With forest management, Director Tuttle did already refer to this, but the baseline for forest management is the California Forest Practice Rules, and the presumption is that for the baseline it would be characterized according to a manager who operated to the extent permitted by law.

With forest conservation, we have two approaches for the baseline characterization. One is what we call an immediate site specific threat, and there are a series of criteria within the project protocol that a project developer would use to make the case that there is actually a site

specific threat for this particular area.

That information would be the characterization component of the baseline. We have also developed tables, default tables based on existing FRAP data. We actually are doing a bit of an update to that. Now, we have some more current information, but these tables provide conversion rates by county.

Another way to characterize your baseline for conservation projects would be to use the conversion rate that is supplied in those tables.

Project activities must be additional to the baseline. Director Tuttle had referred to this earlier, the baseline being what is identified as business as usual. They must also be additional to any applicable mandatory laws.

We have developed several graphs to give a visual of the baseline and additionality. John Nickerson from Mendocino Redwood Company has developed these, and so I think it would be appropriate then, John, if you just want to explain these quickly, and I'll scroll through the graphs.

MR. NICKERSON: I'll be happy to. This

issue of additionality was a large subject of discussion within the working group. We ended up resulting to these types of graphics to understand it ourselves and make sure we were all talking about the same things. So, we think they are very useful in communicating what additionality is.

This is an example of a reforestation project where a landowner basically doesn't have any forest cover on their landscape, and they are opting to plant some trees. What we are showing here -- maybe I will go up here --

COURT REPORTER: Excuse me, sir, could you take the microphone with you.

MR. NICKERSON: Sure. Okay, this is starting point "0", the landowner enters their landscape into a project and they decide to plant it. We are showing the forest practice rules here only for the point that the forest practice rules do not obligate the landowner to plant any trees here.

What we are showing here is the additionality that gets created as the trees grow and carbon tons are generated for this area.

This is an example of additionality for a forest management project. This particular

graphic represents a large part of the California ownerships today where forest land owners have been managing pretty close to the forest practice rules.

You see here at times "0", the landowner may have a hundred thousand tons, and these are just conceptual graphics, so the numbers don't mean a lot, but the change is what is important here.

The blue line here represents the management under the forest practice rules. At the time that they submit their project to the registry, they are able to demonstrate through their characterization of their project activities that they are going to manage at a higher level of stewardship, which may mean something like larger water course buffers. It may mean longer rotation periods, and it may mean just retaining more trees at each harvest.

MS. PASSERO: That is the one thing to add to this could be larger industrial forest landowners who operate pretty close to the forest practices act. The way their business structure is set up, this would be a good example of how a larger industrial forest manager would do a

project and sort of reflects what their baseline may be and what would be additional.

MR. NICKERSON: This is another forest management graphic to demonstrate additionality, but it is for a different type of landowner. This is a landowner that has been managing historically their land at a higher level of stewardship than the forest practice rules, which means they may have longer rotation periods. They already have wider stream buffers and those sorts of things.

At time "0", they have more carbon tons than they would have had they managed their land under the forest practice rules.

What we are demonstrating here is that it takes some time to develop this additionality. It is developed by characterizing their landscape using the forest practice rules. It is probably more characteristic of smaller land owners in the state.

Lastly, we have an example of a conservation project. This is a landowner who may be in an area where land conversions are taking place, say vineyards are coming in, and they can demonstrate that they have a site specific immediate threat.

What that means is that they can characterize their landscape under the site specific immediate threat, which would take them -- this represents the forest practice rules had they maintained their land under forest cover.

This demonstrates what happens when a landowner converts to a vineyard or subdivision. In this case we are saying a vineyard because you can see that there is still some carbon value there.

The green line here represents their project activity, what they are proposing to do as they move forward. The difference here in this case is what they are able to report as additional.

Did I miss anything?

MS. PASSERO: No, I think you got it. Within the project protocol, permanence is handled in a couple of ways. Pursuant to SB 812 project areas are required to be secured with a perpetual easement, which dedicates the land to permanent forest use. In this sense, permanence is used in terms of the land base and securing it and protecting it against conversion to another use.

There is also a definition of permanence

that relates to greenhouse gas reductions. Permanence or duration would probably would be a more appropriate term, and that refers to how long would these carbon stocks, additional carbon stocks, be stored within a forest area. The way that the registry addresses this is through the annual reporting.

If you were to accrue additional stocks through your forest project, the year after year reporting of those carbon stocks would indicate the permanence or the duration of those carbon stocks.

Let's say against the baseline, I have 50 additional tons of carbon, and I am reporting the 50 additional tons year after year consistently. Let's say I do that for ten years, that would mean that the duration of those additional carbon stocks are ten years.

It doesn't necessarily mean that they are permanent in perpetuity, but it does provide the transparent information to let you know then the duration of those additional carbon stocks or what may be greenhouse gas reductions.

An outside entity or regulatory system could then make, whenever that system may be in

place, could make a determination of what they would deem to be permanent. Is it a ton of carbon that is stored for a hundred years? If that is the case, and someone demonstrates that consistent amount over a 100 year period, then perhaps that would be deemed permanent. Who knows, but otherwise, the duration is captured through the annual reporting in the registry.

Leakage refers to greenhouse gas emissions that may result due to the project activity. They are sort of unintended consequences, and in some cases, maybe intended that have the affect of mitigating or offsetting the greenhouse reduction or benefits that are produced by the project.

There are several definitions or classifications out there. We have used a classifications of activity shifting leakage and market leakage. I'm not sure if those terms will actually stick over time or not. There may be some overlap in certain times with market leakage and activity shifting leakage, but those are the classifications we are using at least at this point.

Activity shifting leakage refers to the

transfer of activities that were taking place within the project area to outside of those project activities. As a result, the transfer of those project activities outside of the project boundaries result in greenhouse gas emissions that mitigate the benefits within the project.

What one would be required to do within the project protocol would be to do an initial assessment at the beginning of the project to assess how I guess leaky the project may be as it relates to activity shifting leakage.

They also have to do an on-going monitoring report they would submit to the registry about this. In turn, also, the third party certifier would check these annual reports, and they would also check public documents to see if any activity shifting leakage has occurred.

I'll give you an example of activity shifting leakage. If I am a forest entity and I have 10,000 acres of forest land and I decide to do a project perhaps on 2,000 acres, and what I decide to do within the project area is to limit my harvest, but then I make up for that limited harvest by harvesting elsewhere in my entity. Really what I've done, is I've really offset the

benefits that I achieved in the project area.

The certifier could check public documents in California when you are going to do a harvest, you do give notice of these, so the certifier could check to see if in fact any unintended or unanticipated harvest occurred in the entity area.

I should also mention that this is also an additional benefit of reporting at the entity level, particularly if you choose to do a baseline because a certifier could check this as well. If at the time I entered the registry, if I'm an entity and I do a projection of my baseline, and I also do the annual reporting, the annual reporting acts as sort of a change detection against whatever the projection was.

If that annual reporting falls below what I had established as my baseline, that becomes a flag to the certifier or any external party that this may be leakage. It may not be leakage, it may be the result of a natural disaster, or it may be due to some other set of circumstances, but at least it becomes a piece of transparent information that external systems could use when they value the reported greenhouse

gas reductions by this particular entity.

There are a couple of areas where this issue is addressed within the project protocol.

Market leakage I mentioned before, but this does refer to sort of the limitation of a product produced as a result of the project activity. I don't intend to keep picking on forest management, it is just an easy example to use, but this does also happen with other project types as well.

A product could be a wood product, that would be produced within the project area, but if you are harvesting less, you are producing less wood products, therefore, you are shifting consumer demand or demand elsewhere and maybe some other external party then increases its production.

It is a difficult area to assess. There is some emerging information on this, but we did try to walk the fine line as far as making a determination of what we can ask a participant at this point to do given the current information that is out there on market leakage and some of the difficulties there are in assessing this.

It is strongly encouraged in the

protocols, but is not required at this time. So, we provide information in the protocol in the appendix for them to, if they wish to undertake it, they are able to do so.

Other affects that are similar to leakage, but they are not quite leakage. Those are called up stream or down stream effects of the project. These could be positive or negative. I should note, that is, a downstream -- I'll give an example of a downstream effect, and we will use forest management again. This is a positive one where if you undertake a project and you are harvesting less, it may very well result in less use of equipment because you are not harvesting as much, so you are not using as much equipment, which then in turn may mean less fossil fuel combustion released or greenhouse released due to fossil fuel combustion which would be a positive downstream effect from the project.

Other -- what a project participant is required to do then is to identify the types of upstream or downstream effects that may be related to their project and certainly the ones that are on site could be identified within the entity level reporting as they relate to non-biological

emissions because through the general reporting protocol, you will be reporting year to year your non-biological emissions.

The two combined, the identification of the upstream or downstream effects in conjunction with your entity level reporting, if there happens to be a change, the information is transparent to allow again an external user to make the assessment of whether or not they think it is directly related to the project activity.

It is worth mentioning a few of the quantification elements of the project protocol. Much of it is very similar to what is provided in entity level reporting, so I won't repeat that, but there are a couple of differences.

There is a higher confidence standard. A higher confidence in your estimates is required at the project level, since this is where we would be or a participant would be reporting greenhouse gas reductions.

We also have a table where there are deductions that are based on the confidence in the estimates. The idea behind this is to provide for a flexible approach, but also to encourage better precision and accuracy.

If you have better precision and accuracy, you can have a greater level of confidence in your estimates, and then you would deduct less. At the same time, if you have lower confidence in your estimates, then you would have a higher deduction.

As I mentioned earlier, the greenhouse gas reductions are eligible at the project level reporting and using sort of a stock change accounting approach then, reductions would be deemed if you have an increase in carbon stocks over time, that increase would be considered a reduction.

We have the Certification Protocols that are related both to entity level reporting as well as project level reporting. This is to provide guidance to third party certification, which is a requirement of the registry. The information is guidance to the certifier for how to conduct standardized and accurate assessment of the reported information of the forest entity.

This certainly supports the credibility of what is reported to the registry. I think what is different, a notable difference from the existing certification guidance, is that

certifiers for forest projects and any level of reporting must include a registered professional forester.

There are many requirements within the certification or many components in the certification guidance. I will highlight a few. The certifier will be doing direct sampling of the sample plots that the forest entity has set up. This would occur over five year intervals with the certifier doing the sampling at the beginning of that period and at the end of that five year period.

They will also be checking the annual monitoring reports that are submitted by the participant, and these were sort of the change detection reports that I had referred to earlier. They will also assess the methodologies, estimations, models, and calculations that are developed and used by the participant.

There is a requirement that any reported data must be free of material on the statements, that means that the results of the direct sampling must be within 15 percent of the certifiers results.

That is the conclusion of the

presentation. There is certainly a lot more information contained in those protocols, but those are the major points.

MODERATOR BROWN: I was going to suggest first that we -- well, we have two options here as I see it. We can take specific comments on sections of the protocol and facilitate public discussion; Jeff Wilson of our staff has prepared these workshop questions which really go section by section through the protocols.

Another option would be to allow folks, including those on the phone, to provide general comments on the totality of the forestry protocols. I think we have two options. Michelle, do you have a preference on how to proceed with the public discussion or Jeff?

MS. PASSERO: I think if people have comments, that would certainly be helpful. I'm sure those that have already read through the protocols want to or have a burning desire to provide feedback outside of those questions, that may be helpful in --

MODERATOR BROWN: Should we ask the people on the phone to first provide any comment or identify themselves?

MS. WITTENBERG: Shouldn't we have questions first for anything that Michelle said?

MODERATOR BROWN: Sure. I don't hear anyone on the phone.

MS. GREENHAUGH: Yes, this is Suzie Greenhaugh from the World Resources Institute. Would you like us to sort of put (indiscernible) comments, and then that sort of open for general discussion. Is that what you are asking?

MODERATOR BROWN: Yes. Do you first have questions for Michelle Passero?

MS. GREENHAUGH: No, not really.

COURT REPORTER: Can she identify herself please?

MODERATOR BROWN: Can you please repeat your name again for the record? We didn't pick it up the first time.

MS. BROWN: Suzie Greenhaugh from the World Resources Institute.

MODERATOR BROWN: Is that Suzie Greenhaugh?

MS. GREENHAUGH: Yes, that's close enough.

MODERATOR BROWN: Susan Greenhaugh with the World Resources Institute. Did you have

questions for Michelle?

MS. GREENHAUGH: No, I don't.

MODERATOR BROWN: Does anyone else have questions for Michelle before we open the floor to public comment.

MR. ANDRASKI: This is Ken Andraski from the Environmental Protection Agency on the phone.

MODERATOR BROWN: Yes, sir.

MR. ANDRASKI: I guess I have a question. I was interested -- I do apologize for not having studied the redraft, although I did read the previous version and participated in the expert workshop. I am interested in leakage. There has of course been a lot of discussion of it. I know it is very tough to get at.

It interests me that the registry on the Forest Protocols are still not able or do not require addressing market leakage when they focus on protection as a major activity to be reported and registered and certified in the registry.

Some of the work, as Michelle and others know, to date suggest that protection, especially of old growth forests on commercial forest stands that produce commercial wood products, have a very high level leakage in the sense that if you

withdraw 100 units of redwood or of doug fir or some other species from the market, then somewhere else is likely to come on to the market if demand remains the same.

I am wondering if you can give us any further thought about whether there is debate within the registry process to try to address this issue since it seems critical for the environmental credibility of including protection as an activity.

MODERATOR BROWN: I guess I would call upon a member of the work group to respond. Michelle, would that be you or Doug?

MS. PASSERO: Yes, sure. I guess I should just state up front that -- I think this was mentioned early on -- hopefully people can hear me. I think Diane Wittenberg had mentioned this as well, that these are living documents. I think that as we progress and get more information and learn, that these protocols will be improved or edited or changed over time.

One of the difficulties with market leakage, and again this also refers back to the balance that we are trying to walk with, trying to get participation in the registry while also not

coming up with so many requirements that would discourage participation. With market leakage, I certainly recognize that there are some good efforts to identify it and quantify it, but there are still elements out there for instance with showing that -- and this relates to causation, that the project activity directly causes market leakage.

Certainly you can make the assumption that a projectivity may cause a certain amount of market leakage, but at the same time, there are so many other factors out there that influence markets, consumer and demand, whether those are regulations, governmental influences, changes in governments. So, the thought was to explain what market leakage is, encouraging people to do that but not require at this time. There is even I mentioned that in trying to even come up with a definition and create a distinction between types of leakage, when we are talking about activity shifting leakage or market leakage, we still need to make sure that is how we are going to classify it as well because at certain times, there may be some overlap between activity shifting leakage and/or market leakage.

To ask a participant to do this when these are not yet set in stone as far as clarification as asked them to take on additional responsibility and additional expense in doing it when it may actually change down the road. So, there are a couple of reasons for it, and it is not to say that market leakage is not at issue, but it is something that I think that we are going to work on over time.

Certainly I think just generally speaking with leakage, it is a big issue, and it even transcends just project level reporting where any time we do have a boundary, we do have a leakage issue, and it does call for at a greater level a coordinated effort for the development of more registries or more systems that really attempt to monitor this type of activity.

MR. WICKIZER: Michelle, may I add to that too?

MS. PASSERO: Sure.

MR. WICKIZER: Doug Wickizer, Department of Forestry and Acquired Protection and work group member.

There is a couple of other things that we considered in that discussion as well. One is

that we have a limiting factor. That limiting factor is the statutes. The statutes in this case we do not register, as Michelle indicated early in the presentation, any growth or reduction in emissions outside of the California boundaries.

The quantities that we are registering, both at the entity and protocol level, are within California. That type of leakage Mr. Andraski referenced is the type that would be shifted to outside of the California boundaries.

For us, that is very difficult dealing in the framework that we are dealing with. The best way that we could find to deal with that was to deal with in on a case by case basis. Both types of leakage are going to have different causes and different sources.

First you have to be able to attribute it to the activity itself and meaning the project would have had to have been shown to be the cause of that market shift. That may or may not be the case on an individual basis. That puts us into a position of having to look at that on set of individual facts, ergo we chose to do the idea of flagging the issue, and then dealing with that concept of on an individual basis.

MS. PASSERO: The only other thing, sorry to interrupt, to add is that certainly external organizations -- people may use the registry, and we do put language in the protocols that external programs may ask you in some form, some way or form, to account for it. The note is there and provided for information to a participant. If they decide to be a part of another regulatory system, that in fact, there may be some deduction made for it.

MODERATOR BROWN: Another question. Can you come to the microphone, please?

MR. COLLINS: Yeah, I'm Terry Collins from Collins Pine Company. I know this issue of market issue -- I mean I can appreciate the fact of the complexity of it and yet it does seem like a really important issue especially when California is a state that imports so many resources. I sort of see a problem with the fact, I guess, if apparently if we don't want to record leakage that occurs outside of the state, and yet that seems like a pretty big issue in this state.

I don't know if there is any way that something could be developed whereby you could -- I mean, if we know that 40 percent of the softwood

lumber comes into this country from other countries, then it is pretty certain that any lumber that is not produced locally is pretty much going to result in an influx of lumber from somewhere else. I just wonder if there is any way of coming up with just some kind of a guideline or average that would address that.

MR. FIELDLER: This is Jeff Fieldler from NRDC on the phone. Is this a good time to hop in?

MODERATOR BROWN: Sure, go ahead.

MR. FIELDLER: For the record, it is Jeff Fieldler with Natural Resources Defense Council. I just wanted to add my two cents on leakage. I guess taking a step back to the big picture. My understanding of the purpose of registry on the project side or one of the purposes, to put the reporting entities instead of positions under any regulatory (inaudible) possible, I would agree there is a lot of what I think Andraski said like a serious gap in (indiscernible) market leakage altogether be optional and have any quantification activity (inaudible) and go along with the comments --

MS. PASSERO: Jeff, you are breaking up

a little bit. I don't know if that is the phone you are using.

MR. COLLINS: Is this better?

MS. PASSERO: Yes.

MR. COLLINS: I was just saying that I think that it really shortchanges the reporting companies who are entering into the California registry if they are not given any guidance on how to deal with leakage. As I read the protocol market leakage, even thinking about it is optional, and quantifying activity shifting for market leakage is optional.

I go along with some of the previous comments that there really should be some attempt at giving reporters guidance. I think that could actually be very influential in future systems rather than kind of leaving reporters you know hanging without any future guidance.

I fully appreciate the fact that there aren't off the shelf methodologies right now, but you know, frankly I think the same could be said of additionality and baseline approaches. My view is the job of the registry or it would be a great job if they took it on, to try to provide additional clarity.

Moving ahead here. A couple of specific technical points, I'm not sure what the basis is for the previous statement that the majority of market leakage or leakage would occur outside the State of California. I'm just not sure what that evidence of that would be. I think some of it would certainly occur within California.

The other point is in my view, the entity-wide reporting doesn't really capture leakage. I mean, yes, if some company is conducting a huge amount of activity shifting, that might be detectable, but because there is no actual process where that kind of spot check occurs, I mean there is no adjustment that would get made on a project report based on any entity-wide data. I don't think it is totally correct that leakage is addressed in part by entity-wide reporting.

MS. PASSERO: I guess I just on the last piece, Jeff, it does at the entity level reporting where you do annual reporting, if your carbon stocks go down, that would be a flag to the certifier to ask questions of why the carbon stocks went down.

Entities are encouraged to also do an

entity-wide baseline projection so then your annual reporting, if in fact, is consistent with your projection, then it provides additional comfort that your project, at least on-site within your entity boundaries, may not be causing activity shifting leakage on site.

But if there is a deviation or a change in your annual reporting where the stocks go down, it does become a flag for the certifier. Certifiers are giving guidance to check for that. Then that information would be transparent to the public and to external organizations to make a determination on whether that leakage was in fact caused by the project activity or if there was something else that may have caused that decrease in stock that is completely unrelated to the project activity. The entity would be providing an explanation as to why there was a change in the entity-wide stocks.

MR. COLLINS: I guess perhaps if that flag is so easy to notice and it is easy to figure that out on the part of the public, maybe the registry should just be doing that anyway.

MS. PASSERO: It is actually the cause. The causation issue and linking the project

activity to the change in the stocks where I think the greatest difficulty comes in. So, we could try a strict liability approach and say, if there is a change in your entity-wide stocks without any causation, we are going to deem it leakage. That would not necessarily be fair or give the opportunity to the entity to provide the explanation of why it has happened.

MR. WICKIZER: Doug Wickizer, Department of Forestry, Forestry Work Group. We did wrestle with some of the questions both Mr. Collins and Mr. Fieldler raised, and we are noting those.

If we can receive any specific guidance items that we could include under those, again, as an example of how to quantify that. I don't think there is a methodology that could be so well grounded at this point that it could be accepted as a standard, but I think we could include some examples of how such a methodology could be developed, again, on a site-specific basis.

I think that would be helpful if anyone would be willing to step forward with that. We would be happy to include it.

With respect to -- we did discuss the concept of not only the 40 percent of soft wood

Mr. Collins raised, but the fact that the 76 percent of the soft woods in California total are imports.

Again, we have the constraints of the project that we are handed to deal with, and that is within the confines of SB 812. That does set a limit for us. The questions you are referring to could be viewed more as something to be addressed at the level of Mr. Andraski's agency at the federal level.

Something for us, if they would be willing to step forward in the systems that they are developing at this time and provide the states some guidelines, even broad on how to put some elemetrics together for us to apply at a more local level.

Again, that will be somewhat market driven, but with respect to the guidelines that we are producing, we have a world. Our world is the California borders.

MS. GREENHOUSE: This is Suzie Greenhaugh at World Resources Institute. I tend to agree with the last speaker. I think that the registry should try and get the developers to try to quantify market leakage is actually something

that is beyond what they are capable of doing, and that is the best way to move forward perhaps in terms of default factors or getting some other external or federal agency to actual provide those figures.

We have looked at this in detail, and we haven't come up with or found anything that are usable for a standard as well.

In terms of the activity shifting, I would have to agree with Jeff, that even though just encouraging developers just to set your activity shifting is probably not enough when they could probably do a little bit more than that.

MR. ANDRASKI: This is Ken Andraski from the EPA. Could I reply for a second?

MODERATOR BROWN: Go ahead.

MR. ANDRASKI: A couple of quick things. One is I will make an effort to try to make sure that you have as much information as I'm aware of on analytic work going on on leakage to help you work this through. I have some other things I could share with you in that regard.

Leakage by definition is not a site-specific phenomenon, so the more you continue to think of it as something you want to see a direct

cause of effect on site, we are never going to solve the problem or the issue in that way. We have to be thinking of some other approaches.

I like the idea of some kind of look up table that takes model results from trade or other models and says, here are the kinds of effects that we are seeing.

A couple of other quick thoughts. One is if you think that you're protocols if one of the goals is to influence other programs, then the more you push the envelope here, the more influence you are going to have elsewhere.

That doesn't mean -- I would like to suggest another thought which is you may want to think about the difference between requiring for the moment somehow adjusting the number of tons reported as a result of including leakage or permanence or other issues as opposed to encouraging the reporting of as much data as possible that would allow someone to do that as methods evolve.

So, you may want to try to push the envelope when asking for information so that this can be looked at more seriously.

MS. HAWES: This is Ellen. Is this a

good time to jump in?

MODERATOR BROWN: Go ahead.

MS. HAWES: Ellen Hawes from the Nature Conservancy. We are part of the work group as well. Our thoughts on market leakage is that we really wanted this to be something that the registry could maybe come up with guidance of.

We had discussed it at some earlier point coming up with look-up tables, and kind of felt that within the time limits, we didn't really have enough data for California specifically to come up with a good and credible look-up table.

The thought that it should be something that would be good if the registry could come up with guidelines or a table rather than having it be quantified on a project by project basis because we thought that might be a little repetitive for the project developers. You know, haven't had time or data to come with an actual look-up table at this point.

I was wondering what your thoughts were on that and the types of data that might be available for the registry to do that.

MR. WILSON: Jeff Wilson, the California Energy Commission. I just want to point out that

there are models available. There is a report entitled "Estimating Leakage from Forest Carbon Sequestration Projects" and is put out by RTI International. I haven't really had a chance to look at it closely, but it describes an economic sector level optimization model. It derives empirical estimates for leakage in different sectors. It ranges from less than 10 percent to over 90 percent in the various activities in regions. This would be a good starting point to actually quantify leakage.

MODERATOR BROWN: Thank you, Jeff. Did you hear that on the phone?

MR. ANDRASKI: This is Ken Andraski again. Actually, I am the funder of that work. One thing that we could do is, we could provide a briefing in some way for you on that work by the people involved to help explain what they know, what they don't know, what the methods are, what the limits of the analysis are, etc., if that would help your thinking progress.

MR. WILSON: Yes.

MODERATOR BROWN: Doug or Michelle, good idea?

MS. PASSERO: Sure.

MODERATOR BROWN: Thank you for the offer.

MR. ANDRASKI: Okay.

MODERATOR BROWN: While we are on the subject of leakage, are there other public comments on that subject? Maury, did you want to make a comment?

MR. ROOS: Not on leakage.

MODERATOR BROWN: Oh, but in general. Okay. I think this gentleman was next. Should we move on from this subject to another subject.

MR. NICKERSON: Can I throw in a comment?

MODERATOR BROWN: Go ahead.

MR. NICKERSON: This is John Nickerson with Mendocino Redwood Company. Michelle mentioned that the entity reporting is optional -- not the entity reporting, but the projection of an entity baseline is optional.

I just want to put this a little bit in context that all landowners in California with 50,000 acres or greater have generally submitted a long-term management plan that would serve as that entity baseline to which then these types of leakage comparisons could be made.

Another sort of big picture idea is I think one of the goals of this whole project here is to keep forests in forest cover. Not only forests, but working forests. I think if we are successful in that, that should be a benefit to market leakage.

MODERATOR BROWN: Thank you, John. I think this gentleman here had raised his hand, and then Bob you are next. Do you want to make a comment?

MR. JONES: Yes, thank you very much. My name is Don Justin Jones, and I am with COPEC. It is good to hear your voice again, Ken. Perhaps you can help me with what I am about to talk about or raise.

I am concerned that we can't see the carbon for the trees in that some of the option carbon pools that are addressed in the protocol, for example, herbaceous understorage and shrubs, which the protocol say may be reported but not certified, misses an opportunity here in California and globally that has been addressed in a category called "Salt Effected Soils and the Restoration and Severely Degraded Lands".

I want to make the parties here aware of

three projects that we are working on where we are not planting trees for carbon storage, but we are using halophytes, which is are salt tolerant plants.

We are looking at projects in Twenty-Nine Palms, also the Owens Valley, there is the forest or managed vegetation coverage of 30 square miles where trees are not possible because of the saline conditions of the soil.

Additionally, the salt and sea offers us new opportunities for the exposure of over 77,000 acres of new land that will be exposed.

Carbon is one component of that overall management scenario, as well as PM 10 suppression, particular matter suppression is quite important, particularly in California and areas where there have been trees, but the existing conditions now do no longer allow for reforestation or afforestation for those.

We want to take up the offer of being inclusive on a case by case method because we believe American science can measure soil carbon retention, can measure the growth, can measure the mid-annual incremental growth. In fact, after this, if it is appropriate, I would like to show

whoever is interested some work that we have done in identifying the species, native species that have a high salt tolerance and would be good candidates.

The reason I bring it up is because we look to the carbon as an additional form of monetary contribution to these projects. We never believed in any of the projects that we have developed over the past fourteen years that CO 2 is enough to fund or fully fund a project. They are always ancillary.

I want to make sure that we have an opportunity to include these halophytes, if you will, that whole family of restorative plants that could be used and have a value particularly here in California, but also have an application globally.

If we are able to quantify and measure these here in California, then I believe they can be replicated in other places as diverse as Saudi Arabia, the Gulf of Bashra, Libya. Once again, I would like to see California science lead the way.

I was very happy to hear Director Tuttle use the phrase "charismatic carbon" since we first coined that phrase in a meeting with you three

years ago.

MS. TUTTLE: You were disappointed to hear it again?

MR. NICKERSON: No, no, very very happy to hear you say it.

MS. TUTTLE: Oh, all right.

MR. NICKERSON: With that long prologue, I'm interested to hear comments about how we can include other modalities for carbon fixation beyond the trees.

MR. WICKIZER: May I take a first stab at that, Michelle, and you can straighten me out. I am Doug Wickizer, Department of Forestry, Forest Member Work Group -- Forest Group Work Member. Whatever.

When we were developing these, the question of what natural forest management and forest management and and those types of terms meant. It was clear to us that in California, forest is not necessarily restricted to the soft wood conifer forest.

We had a guidance in there of 10 percent canopy cover. That then would go back to the definition of a natural forest which is of course WHR types and native forests, native trees

specifically.

WHR is simply an arrangement and distribution factor. The native species is in fact would be the controlling factor with what you are referring to, Mr. Jones. If the land and the soils are capable of producing, for example, restoration of riparian oak woodlands, not using your example, but choosing another one, then that certainly could be viewed under forest management as a forest management project, albeit, there are no forest practice rules that apply to those.

The forest practice rules apply to timberland in the State of California, specifically non-federal. That is lands that grow what we refer to as Group A, but is listed as normal commercial species for the state redwood pines, those types of things. It has a stocking standard for both before and after, so that is covered under the rules.

These other projects would be looked at in your original submission and screening. There is a piece allowed in the protocols to submit something to the registry for them to look at and consider whether it does in fact fall within one of those definitions of forest management or

reforestation or conservation. Some things have to be case by case, just given the breadth of the area we are dealing in.

With regard to soils, we looked at the concept -- what drove us there on optional versus required was changeover time. In most cases for the timberlands in California, again, back to what the rules would apply to in that instances, the variation of soil content is minimal. It does not prevent registering that material, and if at some point the registry deems it, comes across these, and the protocols grow, that may be adapted as a required, but we had to have a starting point.

Michelle.

MS. PASSERO: I guess there's just a couple of pieces just to add. The three projects that we have come up with were driven by SB 812. So, it is not to say that those are going to be the only project types that the registry will ever consider.

I think that over time, there would likely be, and certainly Diane Wittenberg can speak to this, that there would be other project types coming in. So, we had, just in trying to deal with the scope of our work and the time frame

that we are working within, trying to tackle those, the ones that are at least listed, I probably need to understand a little bit more about the work that you are currently doing to see where it may fit in into this scheme.

The optional versus required pools, there are a couple of components. One is sort of dealing with sort of existing registry policy where if something is required, it is certified. If it is optional, it is not certified. In an attempt to create standardization, you know, we had the set of the required pools, a set of optional pools, and then we were also trying to again sort of consider what other pools mostly likely to change over time or the shorter durations, and then also consider expense.

If we are going to require something, then we have to realize that we are requiring a certain expenditure of money and balancing that to do the sampling, you know, and balancing that with understanding that it is a voluntary program.

MS. WITTENBERG: This is Diane Wittenberg with the California Registry. Although we haven't talked about it, I think it is our general idea that protocols will grow and add

types of projects. Certainly we have thought about that in other venues.

With that said, I think that since this was such a big bite, we probably need to digest this and shake it down a little bit in practice before we would add another typology. Philosophically, we are not only not against it, but we think it is probably a good idea to grow the types.

MODERATOR BROWN: Okay, Mr. Jones.

MR. JONES: Just a quick question. Robert Jones from the Ecolinx Foundation.

Michelle, wouldn't it be instructive to look to the Kyoto Protocol regarding leakage in more sort of holistic point of view, and what does the Kyoto Protocol actually instruct us.

MS. PASSERO: I think that is certainly something to look to. I think it also does highlight though the level of the issue as well, and that is for us to try and get a really good grip on leakage, we do need to work at the higher levels also to address this issue.

Again, I just want to reiterate that it is not that these issues are foreclosed, but we are also trying to walk the fine line of working

with the information that is out there and the understanding maybe the expense of the participation in the registry, and that it is voluntary. We are asking these things, commitments of people, to undertake certain endeavors, so it is a balancing. Since it is a living document, certainly over time as we get more information I think that there will be added and changes made.

MODERATOR BROWN: Okay, other comments on leakage, or can we move on and ask Maury to make a few comments?

(No response.)

MODERATOR BROWN: You have the floor now, Maury.

MR. ROOS: I'm Maury Roos speaking as an individual. A couple of questions, one of them is what happens to the owner if the land burns? Does he get all of his credits rolled back?

The second one is, I don't know why you would exclude other ways of carbon accumulation, such as the people who plant orchards and vineyards. It seems to me a lot of urban trees would qualify as well, urban forestry. It is a little more complicated.

MS. PASSERO: I can answer, but I know there are other work group people here who may want to --

UNIDENTIFIED PERSON: You go ahead, and we will add.

MS. PASSERO: -- answer. This is something that I had intended to mention during the presentation, but I think I forgot. That is because our focus is on -- this addressed to what happens if the land burns, and I'll answer sort of specifically and broadly. We do a stock change accounting approach and we have the required pools as we just discussed, and we are measuring changes in those carbon pools over time. A participant would be reporting their total stocks from those required pools from year to year.

If there were a major forest fire, a natural disaster, a harvest, something that is more anthropogenic, that would be recorded. Those carbon pools are impacted. That would be registered within the registry and accounted for.

I think your question also touches upon another issue, and that is if you were to enter in to a transaction with somebody and you had sold some of those carbon stocks to that entity and

perhaps they used those as offsets, that would be something that would be handled outside of the registry. That would be perhaps in a purchase and sell contract that you had with that particular entity. In there the suggestion would be maybe to safeguard yourself, retain a buffer, you know, do not sell all of your additional carbon stocks that you have.

Also you would have provisions perhaps within your purchase and sell contract remedies that would address this type of issue and perhaps that would mean that you would have to go to the market to purchase similar offsets, purchase or rent until you are able to regain those carbon stocks in your own land. Maybe there would be some type of financial payment, restitution to pay for that loss to the buyer. That is something that you would work out with the buyer in a contract.

Again, to orchards and vineyards, I think that touches upon sort of similar issue we were talking about before where we focus -- I think the project type that you are raising are certainly valuable ones, and they may have a climate benefit. We just haven't gotten to those

project types yet, and that is something the Registry may consider down the road.

Through SB 812, we had these particular project types to focus on, and we had our work cut out for us on that.

MR. WICKIZER: Doug Wickizer, Department of Forestry and Fire Protection. Maury, with regard to the urban forestry, that has been something we have discussed at inner-agency level frequently. You may remember -- in our view, one, it isn't a natural forest, so it falls out in that regard. Two, recognizing that it has its own values.

Those can be reflected in some of the other industry protocols that are coming up at this time, specifically power. One of the major benefits of an urban forest is the reduction of use of energy produced by fossil fuels.

In that regard, some of that will be reflected in some of the other industries. If there are values left over that aren't addressed as that discussion move forward, then we may want to revisit that, and I'd leave that to Ms. Wittenberg.

MS. WITTENBERG: There is a long list.

MR. ROOS: A lot of the trees are native to some where in California, they are planted. It might be a bit of encouragement to promote more trees too like you say for energy reduction.

MR. WICKIZER: Agreed.

MODERATOR BROWN: Other comments from people either on the phone. I guess we are jumping around a little bit here. We have touched on a number of specific topics with entity reporting and baselines and leakage. Other general comments?

MR. FIELDLER: This is Jeff Fieldler on the phone again from NRDC, can I hop in with a comment.

MODERATOR BROWN: All right, one comment from Jeff. Go ahead.

MR. FIELDLER: I just wanted to touch on a theme that I am hearing from a couple people. I think it is a big picture comment that might not come up in some of the detailed discussion later on, which is particularly Michelle Passero just mentioned that please remember this is a voluntary program, and we need to keep what is being imposed on reporters, you know, some what under control I guess given that it is voluntary.

I am just trying to square that in my own mind with some of the other introductory comments saying that this California registry was going to provide a really high level of credibility for the people who engage it. In some ways sort of a gold standard, moving ahead.

The thing that I have the utmost sympathy for people trying to do forest carbon projects when the carbon price in the U.S. is basically zero, and I have the utmost sympathy for people trying to craft voluntary programs with their meager resources. I still think you are going to need to figure out which of those goals is more important. Are you more concerned about increasing participation, or are you more concerned with really having gold standard results fitting in your registry at the end of the day.

I guess looking back at the ten years or more experience with voluntary reporting and voluntary programs, I feel time and again over the last ten years or more, the mistake in my view has been made to -- I bet you think cut corners, given resource constraints and given the interest in promoting participation levels. At the end of the day, it has really hurt the programs. I've looked

for the 1605 federal registry as sort of a prime example of that where there are fairly flexible rules, very limited, basically non-existence review by the EIA and DOE over what is being reported.

At the end of the day, it really hasn't served anyone's purposes. It hasn't served the reporter's purposes, hasn't served the agency's purposes, and I don't think it has really spurred a lot of new projects.

I guess I sort of make a plea for the California Registry to try to take a different approach based on that sort of ten years of experience and try to make a different trade off. Again, with the utmost sympathy and understanding of the realities you face, you know, really try to think of yourself as a pre-cursor to you know what people will need to do in regulatory programs, not just as another voluntary program. Thanks.

MS. PASSERO: I guess one response -- and Jeff, I understand where you are coming from. This is Michelle at PFT. First I would like to say that I don't think you meant this, but I believe that what we have developed can be distinguished from the 1605 PB Program. I think

we have -- I don't want to get into a direct comparison with the two, but I do think we have pursued both the idea of rigor, but also, again, it is a fine line we have to walk with the fact that it is a voluntary program.

To try to get participation, get people involved, so they are able to start to even understand the concept of how they measure their carbon, it is a bit of a daunting task for some forest landowners who are not familiar with this. So, it is a fine line to be walked, but I think again, we have to realize that this is a living document, and with time, and as we test these protocols, they will only be improved.

I do think that they are achieving a goal standard, and they will only get better.

MR. WICKIZER: Doug Wickizer, Department of Forestry and Fire Protection. I think it is worth re-stressing the point that Director Tuttle made, and that is that the forest practice rules in California, albeit not the end all/see all of everything, the do set a fairly specific standard.

Those are quantifiable ages and bacillary factors and site indexes, and things that we can model with some certainty. We can

move forward with those as a base, which is quite a bit higher than anybody else that I know of in the nature, or for that matter, internationally, as a productive base for their land.

That is the beginning point, and we go from there and consider additionality. That to me on its own adds a certain quality to those tons of carbon that are in excess of that standard.

Darn it, I lost something else I had there, but I think John might want to add to that too.

MR. NICKERSON: The only thing I would add is I agree that the Forest Practice Rules already set a pretty high hurdle. It may be kind of obscure to those that are not familiar with them, but they do or they will result in forest cover at a pretty high level on forest land, unless of course they are converted.

The other thing I want to add is I think what we have put in the protocols for landowners in terms of what they need to measure sets a pretty high standard as well. So, I was a little unclear of what you might have been pointing at there when you referred to where do we flip from the goal standard.

MR. WICKIZER: I did think of at least one piece of it that I wanted to add. When you are dealing with the rules, you are not only dealing with this sort of cultural standards. I think you heard reference to riparian zones and different wildlife species, those types of things, water quality protection.

Those standards become part of our rules. To minimize and reduce the impacts on any of those values below a level of significance is one of the end products. By reaching that end product, you in essence end up with a higher quality forest management standard than you would for simply corn row forestry.

MR. QUINN: I'd like to ask a question.

MODERATOR BROWN: Go ahead, sir.

MR. QUINN: My name is Patrick Quinn, and I'm a principle investigator. I would like to ask specifically where does the Bureau of Land Management -- every time I hear the word "forestry management" I always think of the Bureau of Land Management. What are we doing in sharing their satellite facilities, and what type of spectrometer sampling are they now doing through their Quicksilver 25 Program?

If I am sitting here as a pseudo-scientist, and I am thinking about instrumentation, I haven't heard anything practical from how I would conduct an investigation of carbon sampling from the Bureau of Land Management perspective.

If I am an instrumentation specialist, which I am allegedly supposed to be, I'm asking where does the sharing with the -- if you are asking how you get acquainted with the public, then the Bureau of Land Management has some of these facilities available. Why isn't it we aren't thinking about making the public aware that the Bureau of Land Management does have some of these communication features that the State of California is probably using right now at some state level?

I am sure the climate of the registry in Los Angeles is fully aware of this, but I haven't seen or heard one word about it whatsoever.

MR. WICKIZER: Mr. Quinn, Doug Wickizer, Department of --

MR. QUINN: I can't hear you, sir.

MR. WICKIZER: I'm sorry. Doug Wickizer, Department of Forestry and Fire

Protection. That is a very valid and on-point comment, albeit somewhat outside of what the protocols are doing --

MR. QUINN: It's always outside, that is why I am here.

MR. WICKIZER: However, to try to give you a partial answer to your question is that the Department of Forestry and Fire Protection, the U.S. Forest Service work tightly together with regards to their remote sensing lab. We work tightly together in a program we have called The Fire and Resources Assessment Program.

A lot of the type of data that you are referring to there is included in other data information that we put out, for example, now in Southern California, we are developing inventories of the mortality from the insect issues.

In developing those inventories, we are certainly involved with not only RSL, but (Indiscernible) and other companies that use that level of sophistication you're referring to in that type of high level resolution.

MR. QUINN: Precisely why I brought the question up.

MR. WICKIZER: It is not that it is not

being used, it is just not timely in regard to our on the ground forestry protocols. At a higher level, with regard to our department, we have been working very closely with the Energy Commission and those people who are state-of-the-art in this area of inventories on carbons and have developed some reports that the Energy Commission has or will have available publicly with regard to state-wide supply curves, state-wide baselines, and demonstration projects on both (indiscernible) and demonstrations straight forest, and the University of California Blodgett Experimental Forest. That is a separate project.

MR. QUINN: I hear Michelle make these comments about the public awareness, and I've watched some of these public groups that have called upon people like myself to assist them over the last 20 to 25 years, and I see them come up and put forth all this effort and then they have no idea of what you and I have just discussed, and they fade away into the blue because the bureaucracy that exists is just too humongous for them to even have any imagination as to how it perpetuates itself.

I am sitting here saying I am 81 years

of age, and I have survived this perpetuation of bureaucracies for 81 years, and now I am hearing it being reinvented, and the public is being left out again because of their ignorance. I hate to use that word, but it is the truth. They don't how the government functions, so how do they protect themselves?

I listen to this excuse, which to me is an excuse because the public is not educated to take advantage of just what you and I are discussing.

MODERATOR BROWN: One more comment, then I did want to allow --

MR. JONES: This is Don Justin Jones again. I'd like to assure you that my experience has been -- and we filed for 1605 B in 1993 for the PG & E. We filed for Edison Electric Institute, Utili-tree Forestry Project in '96. We filed for the USIGI and got host country acceptance in the first project in Asia in 1998.

There has been a continuum of knowledge that every successor program builds on from those that came before. If you did a literature search in 1990 when we began, you would see that there were only two or three, maybe a handful of people,

Ken will recall this, that were actually able to measure below ground soil carbon.

Everyone then was focused on the Weyerhaeuser School of Forestry, how much usable timber is there above breast height. It is only by building on the continuum of knowledge of the confidence of programs that have gone before that we can make statements like why California should be the goal standard because we stand on the experience of other people. For example, in our own research, we actually had to have people go to Borneo, dig up 255 different species of trees, take them to drying, dry them all out, weigh them over time, and publish for peer review so that later on folks can fastly look them up in tables that tell you how much a dipterocarp will sequester over a period of time.

So, I am confident what I have seen here in the protocol to date, even though I was somewhat not critical but observing that there are some other areas for inclusion, I think what we have here is a really good document. I think the best way, the proof of the pudding is will people vote with their feet and with their dogs.

Will they bring projects forward to

register them, with what degree of confidence will they continue to build on those. We have had some setbacks. 1605 B had a 30 percent error, self admitted.

The Edison Electric Institute, 40 companies put their money in, and they haven't invested a nickel in the last five years

MR. QUINN: Yes, tell me about it.

MR. JONES: -- in continuing that.

The USIGI, because of national policies, has virtually gone catatonic, but that doesn't mean that the underlying body of knowledge that was generated from those programs is not available to us.

MR. QUINN: I know the layer -- if I may respond. I was directly associated with the Edison Electrical Institute, and I gave up in 1996.

MODERATOR BROWN: I don't think we are here to solve all of those problems, but we do appreciate your comments. They are somewhat beyond the scope of this workshop.

MR. QUINN: Layer upon layer.

MODERATOR BROWN: Again, thank you. I'd like to give the gentleman from Weyerhaeuser an

opportunity to speak.

MR. PROLMAN: Yes, thank you. I am Bob Prolman with Weyerhaeuser Company. I have just two observations and one short question.

The first observation is I want to acknowledge and commend the efforts of the entities here today, the Registry and state agencies, for taking on this initiative. It is in my view the most controversial element of the global and local climate issue, the whole forestry piece. It is a quick sand pit to say the least. It has been a very difficult one to take on, so the second point I would make is to say thank you for helping to catalyze and focus the attention of our industry on this issue and a level of intensity and effort that I think has been absent to some extent in the past.

With that, I will just observe that we an others in the industry will be making more formal written comments by your deadline, so I will restrict myself to one question at this point.

Earlier in the presentation when the subject of additionality was raised, could you clarify for me how gains and losses in carbon

stocks on conservation zones of any kind are addressed or not included or not? The two categories in my mind would be those that would be happening under the forest practices rules and that in the conversation zones that might be added to beyond the conservation practices requirements.

It comes in this context. When I look at the simple model of a managed forest, over time steady stayed in effect in a good sustainable operation should never harvest below the base stock, should be only harvesting the increment. That is always harvested, and the only other gain that would be occurring or lost, depending on how it is managed, would be in conservation zones.

One of the subjects that has come up in the national discussion with the USDA proposal a year ago under 1605 B in their workshop on this continuing conversation is whether those two, that artificial split I've made of riparian or other conservation zones, required under practices as well as those that might be expanded because of a carbon value associated with it. Are gains and losses in either of those two part of what you would see as -- how would you handle those with respect to the determination of additionality and

then it cools or loses in carbon stocks going forward?

MODERATOR BROWN: John, do you want --

MR. NICKERSON: Sure, this is John Nickerson with Mendocino Redwood Company. I just want to make sure that I understand it first before I try to address it. What you are asking is if one were to manage with larger water course buffers, how is that handled?

MR. PROLMAN: It is two parts. Assuming that there are buffers already.

MR. NICKERSON: Yeah, state mandated buffers.

MR. PROLMAN: In other words, any buffers are set aside by rule. Those are going to accrue carbon or potentially if they aren't carefully managed or for other reasons they might lose carbon, do those gains and losses affect baseline and changes to the baseline over time?

Second, if those are extended by initiative because perhaps the landowner manager wants to create more carbons sink dimension to the forest asset, I would assume those would be part of the additionality gain and loss --

MR. NICKERSON: Right.

MR. PROLMAN: It is really the part that is under the rule. Are gains from the baseline included or excluded, and also are losses included or excluded for mandated buffers or other conservation zones?

MR. NICKERSON: In California, if they are mandated, they are part of the forest practice rules. That would be -- you would have to characterize your baseline with those buffers in mind. That would become part of your baseline. If then you elected to increase your buffer widths or the stocking within your buffers, that would be part of your additionality. You would have increase stocking above your characterized forest practice rules, and that would indeed add to your additional carbon stocks.

MR. PROLMAN: Would the gain in carbon stocks on the non-additional buffer zones and the losses in those carbon stocks if they happen to occur in the non-additional buffer zones be addressed over time?

MR. NICKERSON: There you are referring to those water course buffers are managed at the mandated level.

MR. PROLMAN: Right.

MR. NICKERSON: You would characterize them at that level with their gains and/or losses.

MR. PROLMAN: They would be included in the total stock accounting year to year.

MR. NICKERSON: Yeah.

MR. PROLMAN: Thank you very much.

MR. NICKERSON: I mean other things that would be included into that would be any buffers set up for spotted owls or Marbled Murrelets, thinks of that nature.

MR. PROLMAN: We have lots of those.

MODERATOR BROWN: Other questions or comments?

MS. GREENHAUGH: This is Suzie Greenhaugh with World Resources Institute. I just want to sort of write the question about the baselines. I know I have had numerous discussions with both the Pacific Forest Trust and the Registry about this. I think we agree to disagree on this particular point, but I am not particularly comfortable with the fact that the baseline characterization, essentially the existing regulations, as it sort of causes some problems if you've got somebody that is going to operate above those regulations.

My suggestion is that since we do agree to disagree that the registry should actually put some caveat's into the actual guidance that they actually have at the moment that they specify very clearly up front that the baseline characterization for the registry purposes is only to be used for the registry or might only pertain to the registry. That is somebody wishing to register or sell credits into another scheme, they might have some other different additionality requirements that may be beyond what the registry requires.

Just sort of makes a caveat there that just because you've done what the registry says, it doesn't necessarily mean that those credits are going to be automatically accepted into another regime or another program.

Having said that, it also means that it is quite important that the registry ask people to report what their business as usual is, what their account practices are, just on the off chance that if somebody is wanting to sell to another program that has different additionality requirements that they do have sufficient information that they can actually go back and sort of back out what their

true baseline or what their baseline under a different program would be.

That is just something I think that needs to be highlighted quite clearly in the documents and brought forward. Having said that, I think most of the document is actually quite well put together. There is still quite a few inconsistency problem, but I'm sure they will be ironed out as people read them and reread them and sort get a handle of where there is still a few little errors that have popped up throughout the document.

MR. ANDRASKI: This is Ken Andraski from the Environmental Protection Agency. Can I follow up on her point quickly?

MODERATOR BROWN: Go ahead.

MR. ANDRASKI: I have to leave in a minute. I wanted to make a very similar comment. Baseline setting is extremely important, and your influence in California in setting a standard for how baselines should be determined and reported in a voluntary system could be very influential.

I agree with Suzie. My take on the way it is currently written, you figure out a very legalistic approach to baselines which says if you

meet these certain -- if you comply with California law, etc, therefore, you have a baseline.

What I don't see and which I think is absolutely essential to try introduce to the extent you can, is more guidance on how to set a baseline, how does one quantify a baseline.

For example, what is the scale that one looks at to determine business as usual practices. Is it the county, is it multiple counties, is it the state? How far out should the baseline go in terms of years? What methods are acceptable to make projections as business as usual over time.

To summarize what I see is a huge amount of effort and it is extremely well done on the biological side and having a very crisp depiction of the kinds of data that are needed, how they should be handled, how measurement should be done, how monitoring should be done quantitatively, but a based on almost purely qualitatively. I urge you to do whatever you can to accept more comments from folks on trying to improve -- the guidance on how to quantify a baseline.

My last thought is that the quantification of the baseline and the fluffiness

that could take place by different reporters who interpret relatively general guidance of differentially could be much larger than the errors that might be imposed by reporting biological factors differentially.

MS. PASSERO: I guess I will just respond to a couple of those pieces. Thank you both for the feedback. I think that certainly constructive guidance is welcome, and to the extent that we are able to clarify and provide more guidance, I think that we certainly want to do that.

Just one note on the Forest Practices Act as the baseline. I think it goes back to some of the comments made earlier, particularly made by Director Tuttle around the big picture. That again is to emphasize what is happening within the State of California. That California is losing forest land to non-forest uses at increases rates, which does mean that those climate benefits are also being lost and additional future climate benefits may not be gained.

That is the overall incentive or the overall goal that we are trying to address, that was behind the intent of SB 812 is to somehow come

up with an incentive that keeps forest lands as forests and also encourages forest landowners to do more.

We want to create something that does reward good actors who are going above and beyond and not create an incentive for them to go down to the lowest common denominator. There are increasing pressures that are creating economic incentives to convert rather than to keep land as forest land.

This happens to land whether it is managed forest land, oak woodland, or some other type. By trying to create an incentive that intervenes earlier so we don't get to have projects that are only site specific immediate threats is certainly a goal.

MR. WICKIZER: Doug Wickizer, Department of Forestry and Fire Protection. Part of it -- I also appreciate those comments and I think there is some room without making major changes to insert some accommodation for those in the wording of the protocols.

On the other hand, I think there is some need for us to better relay what it means to comply with the legalistic standards in

California. I think one way to present that is a comparative point, two comparative points in time.

We put out the Fire and Resource Assessment Program Report on a periodic basis. The last time that report was put out I think was 1988, somewhere around that time. The political world was a little different at that time. It was just prior to the major revisions that took place in our Forest Practice Rules.

At that point in history in California, on a regional basis, not on a state-wide basis, but there were regions within California where the harvest rate was significantly exceeding the growth rate.

When we revisited the question of overall state-wide stocking and growth versus harvest in the most recent report with some pretty sophisticated analysis, the result of that was that the growth significantly exceeds the harvest in California.

The question is then the split on ownership, the public versus private. That holds true certainly on the public because of the change in land management policy. It also holds true on the private lands that it is at least one and a

half or two times greater on a state-wide basis, ignoring regions in that comment.

Certainly that has been a direct result of the policy shift on private lands, that policy change reflected in the current Forest Practice Rules. I think we need to recognize -- at least we do as a work group, that bar had a significant shift over time in how land is managed in California.

MS. GREENHAUGH: This is Suzie Greenhaugh for the World Resources Institute. I understand what Michelle was talking about. We had this discussion before, but what I am trying to point out is the fact that other programs might have different additionality requirements. If you try to make sure that the registry is going to have some flexibility for people to think about sort of selling reductions elsewhere, they might have to meet a different standard.

That being the case, you need to make sure there is information in there to allow that to happen. That is sort of getting what Andrea was saying we want this registry to be acting as sort of the reductions in this registry be sold different places around the country or even the

world.

So, it is just sort of a caveat and that you do need to recognize that your additionality requirements are different to others that are out there and to make sure that you are able to use those reductions elsewhere, you need to have a little bit more information and some caveats in place.

MS. WITTENBERG: Suzie, this is Diane Wittenberg with the Registry. We take your point. In fact, as we -- these forest projects kind of leap frog the design of a project registry piece. They would be an element of a project registry, but we see the design of a project registry very much having those kinds of caveats.

That what we are trying to do is somewhat in a vacuum record credible consistent measurement, but that these will not necessarily meet either a single or a series of regulations, and there might be overlays on the requirements. So, we take your point on that, and we have been thinking along those lines as well.

MS. PASSERO: I think to echo that in part is that I think that would apply just not only -- this is something I think is more of a

general statement, that this is not a regulatory system. A regulatory system may have some additional or some different requirements. That is a message that I think we plan or look to incorporate. Whether we are talking about baselines or additionality or some other factors, you know, as we do with the market leakage pieces in the project protocol is to acknowledge that there may be other things out there.

In fact, the Project Protocol over time, because this is a living document, is maybe edited, but also that other external programs may have and including the market may have different ways of valuing it.

MR. WILSON: Chuck Wilson, Energy Commission. Just to highlight Suzie's and Ken's point of going back to what Doug was just saying, currently growth in California that is growth of the forest in California significantly exceeds harvest. So, that would suggest that there is a significant difference between business as usual and what is required under the Forest Practice Act, so you would have different baselines.

MR. WICKIZER: Can I throw an example out of something that has been thrown at me just

individually as an --

MODERATOR BROWN: Doug, John --

MR. WICKIZER: Oh, I'm sorry.

MR. NICKERSON: Go ahead, Doug.

MR. WICKIZER: It is just the concept of manufacturing. If a manufacturer at a later point has a different project that comes forward and they can demonstrate a higher efficiency, the reduced loss in raw resource could then be recorded as a gain in carbon. So, there are other people thinking of different types of projects out there.

MR. NICKERSON: I just wanted to comment on Jeff's comment that the fact that landowners are growing more than they are harvesting means they are managing above the Forest Practice Rules.

I think in reality what's happening is that the lands haven't caught up with the regulatory changes, especially the rules that occurred around 1995, and those lands are still catching up.

MR. PROLMAN: Can I add just an observation. Bob Prolman, again, from Weyerhaeuser. In the earlier comment or the question I asked about the additionality issue in

the conservation zones, when we have been examining the whole issue of baselines and forest assets for several years now, one of the things we look at and in this context we are a commercial enterprise, so this is an asset that is to us from a very crude sense, I'd say it is no different than a factory or a mill. It is something that has to produce an economic return, so it is looked at in that way.

We want to add in valuing this attribute, the carbon and all its benefits and the critical element of course is the quantification of that asset over time, so it can be registered debits and credits. There are two fundamental principles we look for when we look at policies in this area and the way they work their way into things such as registries and project designs.

One is the concept of symmetry. If an aspect of the forest is a source it can also be a sink. If it is a sink, it can also be a source. Ought not that whole asset be in there with a caveat that it can't just be one way. If a riparian set aside its own accrued carbon and that is in the game, even if it is required by rules, there should also be a corresponding obligation

that if it is not managed to accrue or if it stays neutral or goes down or deteriorates, that is a loss. There has to be integrity around that issue.

We commended and look for and advocate that there be symmetry in the putting in of that element in dealing with this issue of these rule required areas. If something accrues carbon stocks or loses it, it ought to be in the game both ways.

My sense was you've done that in the response you gave earlier, and Weyerhaeuser Company would very much like to see that stay in. We know it is a controversial issue nationally and internationally.

The other is that when we look at something like this and the objective that Director Tuttle mentioned at the opening around the incentives for the forests to stay in this state, and actually it is a national and global issue, that I have for years, and even longer for my Weyerhaeuser tenure, looked at public policy with the question of does it reward recalcitrance?

By that I mean, if good behaviors are happening and they are what we want, and sometimes

it is hard to say we don't want to just reward obeying the law because that should happen anyway, but on the other hand, in terms of changing behaviors and incenting a system, is there a way to fashion policies so that those who don't aren't given an advantage by the fact that nobody has to do it or I can delay and have an economic advantage by delaying and not doing the environmentally beneficial thing.

That is a tougher challenge to craft into public policy sometimes. I think you have begun to do that here, but I would lay out as a second policy consideration as you evaluate and design the final elements to put that in too, that are you in effect, maybe possibly doing something some would consider rewarding a complier or someone who goes beyond compliance, and maybe even rewarding disproportionately, a little bit more than some might like, but are you avoiding rewarding the recalcitrance, which is nobody gets it, and those who have delayed just keep on delaying because they know there is no incentive for acting.

MR. JONES: Don Jones. If I could, what I think what will happen is that the market will

differentiate between the products based on the risk. So, if you have projects that are submitted into the Bolivian Registry versus the California Registry, the market will differentiate between the risk as it presently does.

I used to be a regulator with the Securities and Exchange Commission. One of the things you try to do is square up the game so nobody cheats, but the risk is in the marketplace. You invest in your money and you take your chances as they used to say.

One of the things about differentiation is you can see the Energy Star Program where computers, consumer goods are differentiated by things like stickers, and that may be in the market place where the true value of this will be is to reward those positive practices and allow the consumer -- and may oftentimes the consumer is not buying the product for the carbon credit, but they are buying the product for other kinds of drivers.

If we don't have a system that at least differentiates, we can't assess the risk and the reward that the marketplace confers.

MS. WITTENBERG: This is Diane

Wittenberg with the Registry. Two things. Aside from the specific comments people are making, I think I hadn't really realized how people viewed this as being presidential. You know, I guess I was a little kind of more California focused than I realized, so it has been useful for me to hear this.

Also, I wanted to speak to the fact that on the general reporting protocols, and we would follow the same with the forestry protocols, we work with the CEC probably weekly to address comments by participants on the protocols, whether it is simply clarity of language or something we missed addressing or something we should change.

As good as you think anything is, you need to workshop it to a more perfect form, and we intend to do that with the forestry protocols. Whatever is adopted, we do consider it I think as Susan said, a living document that will continue to be revised, hopefully not too much in the broadest sense, but in terms of just making it better from a user's perspective of working their way through it and coming up with good products. So, I just wanted to assure people that is a living process.

MODERATOR BROWN: I'd like to get a sense from folks here of how much more discussion we need on certain topics because we have really a lot of at least three more hours for discussions of baselines, additionality, project entity reporting, etc. I mean, we were scheduled to take a lunch break right now. Do we want to do that, do we want to continue on, are there more topics we want to explore, or are we done? I don't have a good sense. I just thought I would open it up. Certainly we do encourage all of the parties to submit written comments by June 3, which is basically about a week from today.

I would expect that even if the Board does adopt the protocols in June with some changes as a result of this public comment period, we would want to workshop this again in a few months with representatives of the forestry industry to insure that we are actually making some progress in getting people to report and to provide the kind of incentives that Director Tuttle set out this morning is really what this is all about, right?

This is not the end game here, this is a (indiscernible) process, so I guess I hear that

others feel that way as well.

MS. TUTTLE: This is Andrea Tuttle from CDF. Let me just mention that once these are adopted in what ever form it is, that we will be making a presentation to the Board of Forestry, and we will have a good audience there. It's right on point.

MODERATOR BROWN: Just some thoughts that I have. Any additional comments or topics that folks need to hear more discussion at this point?

(No response.)

MODERATOR BROWN: As I understand it, then, after this workshop, we will entertain written comments by the 3rd. The work group will convene discussions I believe next week?

MR. WICKIZER: Yes.

MODERATOR BROWN: To address not only what we've heard today, but the written comments that have already been filed and those that will be filed by June 3rd. Then there would be a revised protocol released some time in mid June. Diane, is that right, prior to the Board meeting depending, again -- I don't know the schedule exactly, I should ask Michelle.

Following the work group deliberations on the comments we've received today and the written comments that will be filed next week, there should be a period of time in which the work group convenes to address in writing in the actual revised protocol the comments you've received, and then what will be the timing of release of that final version?

MS. PASSERO: The final version of the --

MODERATOR BROWN: The final version of the Forestry Protocol?

MS. PASSERO: The Protocols.

MODERATOR BROWN: I am assuming you will have one more cut at this before the Board meeting on June 24?

MS. PASSERO: We plan -- our goal would be to get I think on June 11 or June 14 get the drafts where we would forward them to the Registry Board, and I would say at that time we would likely then release it back to whoever else is interested for those drafts to actually reflect any change that had been made as a result of the public workshop.

MODERATOR BROWN: Will you accept

comments at the Board meeting on June 24?

MS. WITTENBERG: Yes.

MODERATOR BROWN: Will that be noticed in some fashion so that the parties are aware that --

MS. WITTENBERG: Yes, it is noticed on our website.

MS. PASSERO: Actually, could I just --

MODERATOR BROWN: I'm just winging it, but that is the process as I understand it for those that are here in the room. Go ahead, Michelle.

MS. PASSERO: I don't want to interrupt your flow, I just wanted to acknowledge because I had kind of blanked when I was reciting all of the work group participants, and I think I failed to mention that Hancock Natural Resources Group is also a work group member.

MR. WILSON: And Winrock?

MS. PASSERO: I did mention Winrock I think, so I just wanted to be clear.

MODERATOR BROWN: We haven't really gone around with a round of introductions, but I hope folks know who they are. The work group members are available even after the workshop for

discussion of specific points. Michelle Passero would be the point person there.

MS. WITTENBERG: Susan, we didn't introduce -- it is a small group, and it would be interesting if people could just go around and introduce themselves of who is interested.

MODERATOR BROWN: We can certainly do that.

MR. JONES: Point of order. Are we wrapping up? I thought we were coming back after lunch?

MODERATOR BROWN: That is my question. It is your workshop. Do you wish to reconvene in an hour and pursue these discussions further on the record?

MR. JONES: I'm not sure. I can't speak for anybody else, but I have some other issues. I'm not sure if it needs to be on the record, but I think it would be a great time to explore some of those other areas that we have just touched on.

Selfishly, my plane doesn't leave until 6:00, so I don't know that there is much to do between now and then. This is why --

MS. WITTENBERG: Do other people have comments that they would like to make after lunch

because it depends on whether we keep this going? Bob?

MR. PROLMAN: I don't have any specific comments, only that it will be other than what we submit into you next week.

MS. WITTENBERG: Would it be valuable to continue the dialogue?

MR. PROLMAN: I have a plane later than yours. I would be delighted to be here this afternoon. I have found this to be a very helpful discussion this morning, it is really zeroing in on some of the stuff that is friction between the wheel and the axle. I suspect we would benefit in by getting a few more of the topics this afternoon for those who have the time.

MODERATOR BROWN: Wonderful. Then what I propose is would be to reconvene at 1:30, which is a little more than an hour from now. Is that acceptable?

MS. PASSERO: I don't know if others on the phone will join, but it would be great to know who is on the phone just to know who all is participating and listening.

MODERATOR BROWN: Jeff, are you still there?

MR. FIELDLER: Yes, I am.
MODERATOR BROWN: Suzie, are you still there?
MS. GREENHAUGH: Yes, I'm still here.
MODERATOR BROWN: Anyone else still there?
MS. HAWES: This is Ellen. I am still here, but I might have to run after lunch.
MR. FIELDLER: This is Jeff. I'm going to have to take off as well.
MODERATOR BROWN: Anything else you would like to add before you leave?
MR. FIELDLER: I guess one thing I mentioned in passing, and it is in my written comments. I don't want to belabor it necessarily is I do think it would be good to have a little more thinking about two related issues.
I think I am quoting it right in the protocol, but aggregate data would be reported. I think it is pretty important to think through what level of transparency you guys want. From my own perspective, it's basically essential for me to actual use the registry to be able to see what is really going on with a project.
That has been a shortcoming of other

programs, but it was something that was done right in clean development mechanism internationally at AI. It would hurt the credibility of the system basically if a very aggregated level of results was presented, and I guess I sort of put forth the proposition for discussion that what you should release to the public is the certification report, the same information that is handed in to the registry. That is what you need to independently evaluate, you know, what is going on with the project. So, that is the starting point I would recommend for public availability of information.

Later I think it would be good to sort of envision some way to receive public comment on what's been reported. I am not sure what is the best point in the project cycle it is to receive that, but I would vote the earlier the better so that the project reporter and certifier and the registry all have as much time to respond to and incorporate those comments.

Again, that has been a very useful process in the clean development mechanism and basically a way to get free technical input. I'd like to encourage you to think about those issues of public comment and transparency.

MODERATOR BROWN: Thank you, Jeff. Okay, why don't we reconvene at 1:30.

MS. WITTENBERG: Wait. Susan, Bob has a response.

MODERATOR BROWN: Oh, I'm sorry.

MR. PROLMAN: Before Jeff leaves, let me just offer an alternative model. I don't know that this has to be an either or. Bob Prolman from Weyerhaeuser.

MODERATOR BROWN: Jeff, are you still there?

MR. PROLMAN: We may have lost -- I can mention this quickly, or I can hold this until after lunch, and it can be on the record.

MODERATOR BROWN: I think he is -- he had to run. So --

MR. PROLMAN: If he had to run, why don't I hold it until we come back after lunch, and we can put it on the record then.

MODERATOR BROWN: We will go back on the record then at 1:30.

(Whereupon, at 12:36 p.m., the workshop was adjourned, to reconvene at 1:30 p.m., this same day.)

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AFTERNOON SESSION

1:38 p.m.

MODERATOR BROWN: This is the second half of the public workshop on the Forestry Protocols. We have additional time available for public comment and questions, so I would like to open it up for further discussion.

MR. PROLMAN: Bob Prolman from Weyerhaeuser again. I am trying to recall, I think the very last comment made just prior to the break had to do with the level of detail and disclosure around the verification/certification process and the desire on the part of some parties, if I recall correctly what was said, to be able to rely on the information of the Registry to assess what was going on on projects. I think that is what had been expressed.

I just wanted to make an observation of, I won't say it is as much as an alternative as an additional way perhaps, if you wanted to consider options, that is there is also a desire on the part of many participants if they were to get into a project to want and may of necessity need to keep some information proprietary. Yet, you want

to disclose and have transparency.

To me, an ideal model for that, that we look to in other programs and think would be applicable here is to have very clear and detailed requirements and disclosure that would to the table openly between the participant and the verifier/auditor.

Maybe there might be one stage less of that detail would percolate up to the stage, but allow it to be held like other business confidential data, so that there is a verified, there is a set of protocols that would have to be attested to like in the audit process for the certification.

That way there is an independent function, an independent player that comes in and attests to the fact that the processes, the registry's requirements for credible high integrity carbon stocks were attested to and are in fact in place, and here are the results or some characterization of that at a general level. So, there is an assurance of integrity by a third party against publicly set criteria.

It will not give the level of transparency we know some people like, and that is

an alternative for those who may want to participate and need to protect proprietary information, and it reflects the fact that many forest companies, the whole issue of stock rates, growth, quantities, rates of change and so forth, depending on what they include in the project, and the share of one hold assets that represents. That is very market sensitive information. Disclosure of it would be problematic as a business issue. It may be problematic as Sarbanes-Oxley legal issue for that matter these days.

MODERATOR BROWN: All I can say from a state perspective, we have strict rules and procedures for maintaining confidentiality of proprietary information. Right, Lisa?

MS. DECARLO: Right.

MODERATOR BROWN: I'm not sure how that would play with the Registry being a non-profit or non-governmental body. Would you have an opinion on that, Lisa, as an attorney or? I'm sorry to call on you, but since you are here.

DECARLO: That's okay. Our regulations for confidentiality would -- Lisa Decarlo, Staff Counsel, Energy Commission. Our regulations for

confidentiality would most likely only apply to us. I don't know that it would extend over to the Registry, but I would imagine there would be some sort of process in which enter in to confidentiality agreements with the Registry and participants.

MR. PROLMAN: I just offer that up as an alternative or an additional way if one of the goals is to encourage participation to create a secondary method for those who want to come in, might meet this criteria, even though it might not meet an open set of criteria for other projects that some might be willing to meet, just as another vehicle that is used elsewhere.

MODERATOR BROWN: Would that cover optional data only or certified data that would be certified by the Registry as well?

MR. PROLMAN: I think the issue for the participant, if they are a forest-owning company, is not so much whether the information is optional or not for the Registry side, its proprietary sensitivity to the company in the marketplace and under government disclosure rules, financial disclosure rules.

MODERATOR BROWN: Yeah.

MS. WITTENBERG: Because if it was sensitive, they wouldn't report it under optional probably.

MODERATOR BROWN: I just was trying to think that through as you were talking.

MR. NICKERSON: John Nickerson again with Mendocino Redwood Company. I want to talk a little bit about the template that exists for that in California with the existing long-term management plans that get submitted to the State of California.

Many landowners feel the same way you spoke about that they are not willing to share any numbers that would allow someone to interpret the value of their lands, and so they submit them as a confidential addendum. I think that kind of template would work.

MR. PROLMAN: The mechanisms are clearly there. The question is -- my experience is, I don't think this satisfies the concern that was raised by NRDC before the break, and I respect that concern. That is a historical and not unique to this subject matter, and there is a dynamic tension there. I would just offer that perhaps allowing both so that if there is a party out

there that is not a traditional commercial holder that wants to disclose more, or even one who is who has an isolated project that is comfortable for that project disclosing everything for whatever purposes of the project, that the options be there. I think you might find it opens more opportunity.

MR. WICKIZER: Doug Wickizer, California Department of Forestry. I'd like to second what John said and just point out it was a large number of companies that raise those types of concerns when the Board rules were first being developed with the concept of proprietary information.

The Board recognized that concern, and it also recognized the concern of other interests such as NRDC. The balance that was selected was that the state that does hold that information is confidential. The public information is at a much grosser level to where you can't truly identify the inventory of a particular ownership.

That seems to satisfy the balance with the need of the public to know versus the proprietary interest of the landowners.

MS. PASSERO: I just have -- I'm sorry, go ahead.

MR. WICKIZER: It -- no.

MS. PASSERO: One thing I think would be really helpful because it gets to sort of the transparency issue that we are I think still working out, and that is to actually sort of itemize out what we think are the confidential proprietary pieces of information, so we know what they are and then that is the least public knowledge of what they would know. What types of information will be kept confidential because they are proprietary, but the certifier may be looking at. So, any sort of feedback we can get around that from forest interest would be helpful.

MR. WICKIZER: May I suggest that the industrial representatives look at the CARROT report and see if that level of reporting is consistent with their needs, or if there is something else that could be reported in place of those numbers to meet the Registry's needs.

MS. WITTENBERG: This is Diane Wittenberg from the Registry. Right now I am sure that it will meet their needs because at this point, the Registry just collects aggregated data for the public. It won't meet NRDC's needs.

MODERATOR BROWN: Do you have a comment

on the phone?

(No Response.)

MR. PROLMAN: Bob Prolman again, Weyerhaeuser, I sense that if the Registry adopts the mechanism and process that the state already has as far as planning submissions and all that. That is the kind of thing the industry usually likes to see, needs to see, and it works. It's there, prove it.

The dilemma is not so much doing something different from that as the minimum, you've got that model. It is more the disclosing required by the NRDC where I think we all usually get concerned about that disclosure business issue.

MS. GREENHAUGH: Hello? I can't hear anything.

MS. PASSERO: Did you just hear Bob Prolman just speak, Suzie?

MS. GREENHAUGH: Not that well. I got about every third word.

MR. PROLMAN: Some people say when I talk that they hear every third word, it makes sense.

MODERATOR BROWN: Is this better Suzie?

MS. GREENHAUGH: Yeah, that's much better.

MODERATOR BROWN: Other comments?

(No response.)

MODERATOR BROWN: Are there other areas where a discussion would be useful now that we have everyone here?

MR. PROLMAN: Bob Prolman. I have a question. Maybe to go back over something I believe was mentioned this morning. I would be curious to get some expansion of the issue in terms of measurement and significant events or the force majeure events. Could you elaborate further on for the force majeure event, how that will be dealt with, a forest fire or pet loss, or something like that, in the baseline calculation and then to adjustments to on-going inventories?

MS. PASSERO: Sure. There is the entity level and a project level. At the entity level, if you had established a baseline -- I can't remember the percentage just off the top of my head, but I think it is 10 percent loss in total carbon stocks or more, so that would accommodate a catastrophic type event. Then you would adjust your baseline accordingly.

At the project level, you wouldn't adjust your baseline, rather it would be reflected in the reporting of your project activity. Once you were to bring the stocks back up and then obviously certainly if you were engaged in any sort of deal outside of the Registry, then that information would be there and you can see that there has been a loss in the carbon stocks, then you are building it back up.

MR. PROLMAN: If I understand that correctly in the context I recall it being discussed this morning, one of the perhaps yet to be addressed elements that may not be part of this activity task right now is sort of a guidance on an acceptable way if you are going into a contractual relationship and a party is reporting and their inventory has in it a buy/sell adjustment and that gets lost because of a force majeure event, how that would be dealt with?

MS. PASSERO: I mean that is the right --

MS. WITTENBERG: You would look to the Registry. I wouldn't think that would be in the scope of the Registry's guidance because I think that would be a bi-lateral contract between the --

MR. PROLMAN: There is a question of liability for replacing it. The other question that comes up for example, in an asset situation, just a traditional asset, if there is a force majeure event, the parties often talk to the extent it can be who has liability to do any insurance or whatever else. But if it goes even beyond that, the parties hold each harmless, let's say, they realize it is going to be a loss and nobody may recover that one.

We addressed this at the USDA in terms of if there was a classic, let's say, a forest fire loss, there would be a baseline adjustment, and while that grows back, there is no additionality until it gets back to where it was, and you baseline adjustment that back in. So, it is like a divestiture and then a reacquisition baseline adjustment. It is sort of a safe harbor or hold harmless for that, and what we would be looking for is the acceptability of that in the inventory management set of rules. It is really a baseline adjustment question I suppose or on-going inventory adjustments, such that we understand how to account for it, and then we have clarity about how to deal with the contractual relationship on

the buy/sell agreement.

MS. PASSERO: You are suggesting at the project level as well --

MR. PROLMAN: It could apply to any level, yes. Absent that clarity, then it is all left to the contract, and you may not get clear understanding or uniform reporting of how those events are handled on every transaction that comes in to the Registry. It is sort of the fasby gap guide for accounting for carbon.

MODERATOR BROWN: Mr. Jones, did you have issues you wanted discussed this afternoon?

MR. JONES: I'm sorry I came in a little bit late. It seems to me the two issues that I've heard so far has been the protection of intellectual property. The issue of the fungibility and certainty in the marketplace, I think with regard to the first one, intellectual property, if you want to have people come to the party, the rules have to be fairly open and direct.

There are always proprietary modalities. For example, the measurements, the algorithms that you use. When we first began our projects in Malaysia, because we were new to this, we wanted

to publish as widely as possible, so we had 35 peer reviewed articles, so that the data would get disseminated, people could agree that a ton is a ton is a ton, whether it is a Malaysia Dipterocarp or a California redwood, that there is an understanding of terminology across the table. So, when we take a look at the baseline issues that we know what a baseline issue is.

That was very good and charitable in the beginning to get the dialogue, and then what we started to see were subsets of the intellectual property where people would calf them off and then hold them, and then you would have to pay for those to get developed, like SGS later on developed their Forest Protocols.

In order to get the answer, you've got to go to them and pay them. That is okay if everybody understands that the end of the process is still a ton is a ton is a ton, and that you have a clarity on how you get to that, whether you choose to take the fast track or the long extensive one. You have to prepared at the end of the day for the auditor to show up.

If the auditor shows up and your methodology is suspect and you can't point to a

rationale for it that is intellectually defensible, then you are stuck.

The other thing when we dealt with the issues of force majeure in projects in Malaysia, it was kind of actualmatic that if there is a forest fire, it is always your trees that burn and mine that are saved, so what we tried to do was set aside a sinking fund to underestimate a percentage and put that into a satisfied fund that would be used to hold the totality out there.

When you start to deal with that, you start to talk about carbon leasing over time, which the service of the tree for the finite time and when I paid for tenures of carbon service, that the tree continues to give carbon service for 20 or 30 more years. If I only paid for ten, why should I get the benefit of 30 or 40 years more? So, there are in the marketplace set aside sinking funds, there is pools.

For example, the Utili-tree puts all of their carbon tons into a pool and divides the pool amongst the larger numbers of members, so that if a project in Malaysia goes up in smoke, you've got projects from Bolivia to back it up or projects from the Redwoods.

That only happens if you are out there aggregating in a macro market sense where you can replace those. We used to call that a set aside or sinking reserve fund. There are methods out there to do that.

As far as the force majeure, how do you deal with that in a commercial contract? You know, when you go out there and contract to plant 100,000 acres of pinus caribiensc and you get 95 percent survivability. How do you deal with those? Well, those are traditionally by sharing the risk. It is at the end of the day the purpose of what I see here is to make the rules transparent, so that you understand the risk. Not to mitigate the risk 100 percent, otherwise you wouldn't have market fluctuation.

As long as all the methodologies are transparent enough to allow for the market to speak, then the market will sort out what is "good, best and in between", what is acceptable with the rate of risk that you need and for how long do you need that offset for your activity.

If you are running a short-term activity that is highly carbon intensive, you may just need those first five years to get you over that

offset.

If you are engaged in a power plant where theoretically you have a 50 year life plant, you may need a longer stream of carbon and may have to at that point diversify. That is generally what I think will happen is there will be carbon pools that will be established where there will be aggregators that aggregate and put it all in the mix, so the whole investment doesn't go up in smoke, no pun intended.

Those would be my initial thoughts on it. I think initially for intellectual property, you have to open share it, and then when it gets to be proprietary you have to agree on how it got to be that way, and pay the difference.

MR. WICKIZER: Mr. Jones, I want to make sure I understood what you were saying correctly, that the state would not necessarily accommodate that risk, simply state what it was, that the market would accommodate the pooling to address the risk? Say the brokerage house or whoever is handling it if there is a trading system, but the transparency is the state's obligation?

MR. JONES: That is the experience I bring to this being a regulator in securities,

that you have to make sure that the game is fair, and then the market speaks as to what AAA quality, BBB, CCC, junk bond. Hopefully, it is the rate of risk that determines that, and the rate of risk is determined by who are the players, what is their track record, what's their history, what can they deliver, and deliver it to whom. Then it becomes straight commercial.

No, I don't expect the state to set up the balancing of the equities. If something happens, you are not going to come in there and say, well here we will just give you what we've got out of our pool. Unless you have to do that in a different kind of market environment. If you have a emerging market place, like say Nicaragua, where there are no stock markets, the state has to stand in, in some instances and guarantee that what is coming off the dock is good. There are commercial services that do that.

I don't see that the state gets in to determining that as much as it sets up the methodology for fair open transparentness, transparency. The state sanctions a lot of activities where the buyer takes the risk. Just go up the road to any casino nearby and you will

find out what I mean.

MR. PROLMAN: This is Bob Prolman again, Weyerhaeuser. I would compliment that very much in agreement with what was just said, that the state shouldn't indemnify this. What we are looking for as far as asset owners would be what is a ton, what is an eligible ton, for what are the rules around its quality, what kind of sources they are coming from, the risk around it, and so forth.

However that framework, the counting and measuring framework set of rules, what are the rules that are accepted and methods of measuring that ton itself, so that I know I have a ton. Is it a 80 percent certain ton, is it a 90 percent certain ton? Then the marketplace can readily move into the concepts.

In fact, there are many papers out already dealing with the concept of renting or trading the carbon ton for a short limited time. There are participants in the global insurance market looking at Swiss Reed coming up with like kind pools or straight insurance instruments, and then allow the parties to the trade, would register the trade with the Registry to determine

the liability ownership of fulfilling that through traditional market risk methods. It works very well.

MR. WICKIZER: Forgive me for delving on this, but I think it is pretty important. We have some factors in California that could assist us -- this is Doug Wickizer, excuse me. For example, we have a ten-year fire history and a return fire risk. With regard to insects, we have been able to make I would hazard to say kind of a gross guess as to what part of California has a 25 percent or greater risk of being impacted by insects over the next 25 years.

Is it that type of thing that you are looking at or something more with a finer resolution?

MR. JONES: I'm not sure I am able to speak to that, but it seems to me if you are able to set insurance rates that insure against accidents, fire, beetle infestation, shipping accidents at sea, then why wouldn't you be able to insure against loss of carbon credits.

If the state wants to make sure there is a replacement then perhaps a regime that puts carbon induced activities on state land, and that

gets held into a trust for the state benefit, and then you draw down from that account.

If you are a participant, if you pay into the pool, it allows you to draw those down. These are some pretty esoteric areas, but risk mitigation goes all the way back to Lloyds of London. I mean if you can insure shipment of tea 350 years ago, you can sure insure some trees in Mendocino now.

MR. PROLMAN: The other piece of that as well is a landowner manager now, if they've got a sizeable operation and they are commercially running it, we will take that kind of data about fire risk loss, statistics, region, probabilities, insect loss, and so forth. All the traditional risks to the wood volume itself which are already being managed, figure out net losses in terms of their growth and yield assessments to come up with what they think they will be growing on that land, net of all these risks. The very process of sustainable management in a modern forestry operation today is already managing an netting those risks into the assessment of fiber pool. That is correlated, of course, to the carbon pool.

With that in mind, once the accounting

rules and framework for the carbon are similarly understood they match the financial system, the ability then to bring that to bear in managing that risk is a lot easier for the participant that is going to trade and they would be looking for, so where can I hedge the residual risks that I have, that I haven't already accounted for. If there is a state fund, like some states have a generic fund for auto insurance, so you buy into that, or swiss reed moves to market or like kind pools, or self insurance through different management approaches.

The buyer and seller will want to look in qualifying the caliber and the price they pay for the carbon asset in terms of how risky is it in terms of permanence and how certain will the assessments that the ton is a total ton, it is not going to get marked down if I sell it across the board or on a future trade regime or something like that. It is very much like currency I think.

MR. JONES: Speculation is what drives it, yeah.

MR. PROLMAN: It can get very exciting, and I was told to keep this out of derivatives for the time being, so I won't go there with that.

MR. JONES: If I may, your industry has been very good at managing those risks, you out performed the Standard and Poors 500 over time.

MODERATOR BROWN: I guess I had a question based on my reading some of the comments from some of manufacturers of forest products. How do we respond to the issue that forest entity is defined as a forest company as opposed to a manufacturer. Are we at some point going to extend the forestry protocols to other entities beyond landowners? I would just like to hear the answer because that seems to be a theme in some of the comments that we received.

MS. WITTENBERG: I think that -- Diane Wittenberg. That goes to the issue of where the reporting happens, which I think that in our conversation, is a clarification issue, right? It is not a substantive issue.

MR. PROLMAN: If I can speak to that --

MODERATOR BROWN: If you would help me with that please.

MR. PROLMAN: The last three days because of this event, you have helped focus some attention on a number of subjects. This is one of them, and there is a lack of clarity on the part

of many of the major forest industry members.

The wording about the forest product pool, of carbon sink, could be registered by the forest owner. Some have interpreted that to be an assertion that only the forest owner can ever register that, and a failure to acknowledge that carbon entity starts with the log that gets harvested and moves through a value chain. It will cross ownership owners of entities along the traditional market profile of our industry today. It is not all monolithic. Every company is not vertically integrated.

One of the questions was to get some clarification about that, if this was talking about trading, you would have probably addressed it, and it got into the whole question of who owns the right to the title of the carbon asset as it moves out of the forest owners hands along the value chain. Is it separable from the physical wood product to be held, stripped off like a coupon of a bond, so to speak, once it is registered by a party, particularly if it is traded as an offset.

You could sell the wood product bundled or unbundled with the carbon. That is a trading

protocol discussion, and some of the comments we got from our industry will be looking to raise that concern and get clarification around what the meeting was of that particular element.

MODERATOR BROWN: I think that would be very helpful.

MS. PASSERO: That does get more into value chain issues certainly.

MS. WITTENBERG: I'm just again -- these issues are really addressing how far or where the boundaries of registry are to a certain extent. I'm thinking about currently the State of California as it looks at it as RPS standard is looking at whether utilities and who owns the emission reduction credits, and then is it stripable. That is really the issue.

MODERATOR BROWN: Or tradeable.

MS. WITTENBERG: You know, I didn't really see that in our view here within our registry. I don't know if we should expand our thinking.

MR. JONES: This is Don Jones for the record. If you look at it through the whole activity, from the time you plant the tree and it grows till the time it gets delivered to the mill

gate, if you just stop at the mill gate, and you don't take into account the efficiencies of the milling operation, what happens to the residual, does it get used for fiberboard, for press board, is it used for biomass generation, and you don't take it out of the mill gate to the end product, what is its usable life.

Is it going to be used in a house, is that a 40 year use --

MS. WITTENBERG: That's addressed.

MR. JONES: -- commercial use. What you are going to end up with, I hope, down the future is a full carbon counting for the whole cycle of human induced activity, which may be kind of very very far reaching, but at a certain point in time, to deal with the whole issue of climate change, which is what brings us to the table, you didn't have to do that.

Maybe the protocols will get segmented with the production of raw material up to this point, the process of the raw material up to this point, the transportation of raw material up to this point, and then the end use of that material as it gets processed through.

The value of having a forest industry

that is fully integrated like our clients in Malaysia, we've got a million hectares with twelve saw mills and transportation, 19 ships, is that you can actually trace the log from the forest to the end user in Tokyo and see where there are economies of efficiency of carbon reduction throughout the chain title, and then find out where there are the interventions that are the cheapest that bring the greatest return.

It may be in the forestry, it may be at the mill, it may be in the transportation. You know, you may just want to switch from using a 30 year old Spamaru, which burns a lot of number two bunker fuel to a five year boat that uses a higher efficiency.

MS. WITTENBERG: We have had a lot of discussion --

MR. PROLMAN: I would add -- Bob Prolman, again, Weyerhaeuser, for the record. You have in the documents a methodology for quantifying that product carbon that residual asset all the way down to the very final use, bate and affects type of thing. In fact, we will be commenting on that, and the only thing the industry will probably talk about is something

that we are now taking as the next generation methodology to tighten that up even a little more accurately.

What you have is what I think is a practical way to from a financial side, I would use the phrase "Create a present value debit or credit you can take at harvest to quantify a legitimate value at that point in time."

The issue, and it does come up in the RPS area as well, especially since a RPS sold as with it the greenhouse gas attribute, is that in both regimes, RPS and the greenhouse gas subject area, the environmental aspect is bundled with a thing, the electrons and the power gain, a piece of wood or fiber in the forestry area. Then there is a transfer. If a transfer is across an economic boundary from one company to another, how do those two things pass together, can they be separated, can they go in totally different directions, who gets the right to register it, own it, ask for value and trade? These are trading rules, really questions that came up in the bundle/unbundle who had the authority to do that, do you accept that or not.

Some RPS states don't, some do on that

particular subject.

MS. WITTENBERG: They are addressing that -- I mean there is a law working its way through the legislature in California, so it is going to be legally decided.

MR. PROLMAN: Legally decided, so, yeah. That is where a lot of the industries anxiety right now with the wording you have and a lack of clarity about how much of the registry and trading concept is embodied in this action. That is the confusion on our part about that, that we will be looking to ask for clarity on that. It will help us at least then give you a more appropriate response to what you have on that issue.

As I understand from today, there is a chapter yet as unwritten that we all really have to wait for here.

MS. GREENHAUGH: This is Suzie Greenhaugh (indiscernible). I have talked to a couple of forest manufacturers about this, and the other thing that popped into mind is the double counting issue. I always got the impression that some of the forest product manufacturers feel that they should be able to claim some of the reductions that are associated with wood products

as well. They would like to report them.

From what I gather, the only people that can report them are the landowners themselves. There could be at times a double counting issue that needs to be addressed if you do actually allow forest product manufacturers, I guess, to actually claim credits as well.

MR. WICKIZER: Doug Wickizer, Department of Forestry. That is a valid point, Suzie. That was the other half of the discussion that we had, and the first half was the one Mr. Prolman raised with Weyerhaeuser. The only balance we could find was that the carbon was registered by who owned it at that time, the market would then dictate the ultimate ownership of that, be it or albeit not necessarily a registry problem at this point in time, understanding that we grow legal wings down the road.

MR. PROLMAN: Bob Prolman. It is actually I think agreeing with your comment. It cannot be double counting, I think that is important. If we understand how at some point when that piece of carbon is created along with the piece of wood as it leaves the forest, it's been registered by the forest owner, let's say, as

a product present value amount of it, that is okay to book as a credit, then what happens to it.

If it has been registered by the forest owner, in effect, if the wood goes forward, and it is in the hands of the manufacturer or somebody else down the value stream it is without the credit because it is booked by the forest owner when it was created.

The forest manufacturing part of the industry has said well, but can I have rights to it, and we ourselves are still sorting through the understanding of how that value chain transfer ought to occur, there is a whole lot of argument about who is adding the value with who is adding carbon value or destroying carbon value, as well as the product stream.

MR. WICKIZER: Doug Wickizer again. Is it that there is a gross value there at the beginning. That is what I was referring to as possibly other -- we could possibly foresee other projects down the road, part of the project or one of those projects, I think I mentioned earlier, was the whole concept of efficiency in processing. Now if that can be demonstrated as a separate carbon recovery that would not have been made out

of that initial gross amount, then I would suspect somewhere there is a means of identifying additionality with those gains in efficiency.

MR. JONES: Don Jones. The lawyers in the room will remember the Palsgraph Case where you've got the butt four activity, but for the intervention this activity would not have occurred. We intervened, the activity occurred, which the means of generation for these activities over the baseline.

Just as important are the creations also as you alluded to, the retirement. When do they cease to exist? Do they cease to exist when the utility company buys them and now burns coal to offset their activity?

Just as important as the creation is how we retire this and what these series are. These can't be allowed to continue on in perpetuity. They have got to be capped and traded and used because it is a diminishing pool.

MR. COLLINS: Terry Collins from Collins Pine. Yeah, it sounds kind of like maybe if the forest owner has a certain amount of carbon credit for what so many board feet is going to go into lumber, then that is in a sense, it seems that is

establishing a baseline for the product. If say the manufacturer is a different entity, then he is going to have to build above that baseline like maybe he might decide well, I might install a co-generation plant, and so he might get some benefit over and above that baseline maybe. I am just making that suggestion.

MR. WICKIZER: Again, I guess I forgot to mention the one thing. In these protocols, there is a basic efficiency assumed. There is a mill recovery rate assumed, and that is where I am saying that there is a possibility for other projects if you go beyond that as these grow.

MR. PROLMAN: Bob Prolman again for Weyerhaeuser. Actually, those last couple of comments on that, the last three comments made popped a picture into my mind that I hadn't thought of. You have in there the efficiencies of the mills and the decay rates all the way to the end, short of the I guess landfill disposal piece, product pool and landfills.

There are occurs and equations and everything that sort of lays out that baseline, then that does open the opportunity for someone to come in and say I am going to show you how I do

all of that and have a delta that is different and additionality and create a project around that, that would create additionality. I think you have the basics in place to deal with in general the issue of if a carbon credit is created, at some point if it is used to offset an emission, it locks up a liability against an asset, to neutralize each other out, that is what that whole concept is about as I understand it.

That might just stay there forever, that is the permanent risk issue. If someone without loss from a permanence force majeure event wanted to unbundle that, if I took my whole forest, locked it up in carbon credits, sold it, and 30 years later wanted to harvest it all, if I could replace those carbon credits with an alternate set at that time, so that the original bundle -- maybe it is like closing a commodity, an open and close position kind of thing, and I free up my forest asset now, I have to replace what I sold against that liability I incurred when I sold it, so that can actually remain fungible over time.

MR. WICKIZER: Yes, it can.

MR. PROLMAN: I think you have a lot of the foundation fundamentally now built into this,

and we need learn more how the financial market will work with that to maybe see how the trading system could then take this and do something with it.

MS. PASSERO: I think Don's point was when he was talking about the different segments to be developed, where we sort of drew the line then is having the decay rates attributed to the wood products, and then there is another segment that would follow and down the line until you have the full cycle captured.

MS. WITTENBERG: Diane Wittenberg. One of the things we were sensitive to, I think, is where the lines are of where a registry starts and stops as opposed to trading and brokering on one side and policy and regulation on the other side.

If we get too much into trading rules, then you have Arthur Anderson problems potentially. That is why we tried to draw the lines about where we did. So, it is interesting to me to hear this discussion that kind of -- I mean this whole forestry protocol kind of pushes the envelope, but I didn't expect it to push it on where the boundaries of what a registry might lay out.

I understand it is different than if it is a regulatory registry and if it is a voluntary registry, and we are really talking more broadly than that. Still, where the line is between the free market, the state who is not looking at the registry aspect, whether it owns it or not, but at trading issues, it is all unclear.

MR. JONES: There is even more permutations than that. Say you need -- Don Jones for the record. Say you need the carbon credits for compliance, and when you use it, it is gone. Say you buy the carbon credits for speculation on the theory that you are going to hold it and sell it to someone else, wouldn't it be equitable as we did in the contract, that if you buy it and you resell it, that 50 percent of the resale profit goes back to the creator?

MS. WITTENBERG: It's like art. That is how the art world (indiscernible.)

MR. JONES: That is what we in fact did. When we resold our carbon credits to the Edison Electric Utility Institute, we split it a check between New England Energy Systems and Innoprise in Malaysia because we had anticipated that in the contract to avoid what we call buying the low

hanging fruit.

There's why not buy it cheap, and then I hold it and then I resell it, and then the person that created at the forestry end, gets no benefit except that the cost of creation. When you structure the contract, where all you get is the cost of creation, there is no added incentive for it to be better because you don't care, you've already resold it.

MR. PROLMAN: Bob Prolman again. I guess the one thing that as a first generation, and again it may go beyond this current initiative, maybe it is a follow on project, but the more the Registry can qualify the measures for quantification and the rules for once you know when a ton is a ton is a ton, whether it is in or out of the ability to register it, that it is a qualified ton, if you will, and how it gets accounted for an adjusted over time. Basically, the accounting framework rules and the quantification measurement methodology.

With those two in place, we begin to have the capacity for those who want to create a market system, a Chicago Climate Exchange, for example, is setting up the market trading

mechanism and the contract and all the relationships.

The biggest question is, what is this commodity, and does the one I have qualify? Is there some place I can register the facts of the deal so that it is formally accepted like we do with, what is the term, a red herring or something like that in a securities deal.

MS. WITTENBERG: One of the things -- this is Diane Wittenberg -- we have been thinking about for a project registry in general under which these projects would fall, would be sort of -- one element of it would be an electronics document rule that would be almost I don't know the equivalent would be an escrow company or what, but where all the documents if you were looking to buy or sell something, although we, as a bank, wouldn't be involved in the sell, someone who might want to buy it could come and look at all the fact verification, validation, ownership on line. So, it just facilitated the transaction.

MR. JONES: I think that works in an emerging market when you have the time to look at the new product. What makes a market is volume. Nobody I know that trades volume goes and looks at

the 8 K's and the 10 K's of the companies and does that kind of deep analysis because they are looking at fluctuation. They assume that because they have been registered with the federal government or trading agency that there is no fraud involved.

Then you have to have the opprobrium that comes down when you do discover that there has been misreporting, and that opprobrium is barring those entities from registration, and that is the risk that the market place takes into account when it sets that up. So, I am not sure we want the state to be in there verifying every single carbon ton as much as we are sure of what comes through the gate if you do a statistical analysis of it that it is meaningful when it comes through there. That 99 percent or whatever is in fact what you say it is.

We do that all the time when we sell water, bottled water, milk, those kinds of things. There is a certain standard that you have to meet, so I think Chicago Board of Trade and those other institutions -- you know, I remember Dick Sandor talking about that. What he said when the Chicago Grain Market started in the 1830's you couldn't

have fungibility between winter red rye and Kansas. You needed a market place for those to exchange, so there is a nominative value that is equal to both.

MR. PROLMAN: Bob Prolman again. At some point -- this is moving -- the whole interest around this trading concept is growing as people begin to think of it as an asset. If it is an asset, one question that was asked of me is it a commodity that's being traded, or is it a security that is being traded. The minute that decision is made, whichever one it is, there is already established bodies in state and federal government that will move in to do some of these policing functions.

It is a unique thing, so like there is a traditional commodities exchange, and there is a traditional stock exchange mechanism in existence, there may have to be the new traditional carbon exchange. We have wheat, we have corn, now we are going to have carbon, and the first one may be the one that is being basically piloted out of Chicago.

Some of the framework for integrity on the financial side, property law, commodities

trading law if that is the way it goes, is there. You will own the model here at a state level exchange or registry rather for how you register that deal then will be traded routinely.

MS. WITTENBERG: What would make the difference between it being a commodity or a security?

MR. PROLMAN: That's when I've got to defer.

MR. JONES: What is perspective. In other words, I guarantee to deliver 5,000 tons of 2005. The activity hasn't occurred yet, so we are dealing with a futures. I have to either go out there and plant it myself, or in 2005 acquire it.

Securities are based on past performance, something that the companies have already generated, activities have been on-going up to a point. You know it when you see it because they are traded in two different forms.

The things that are going to affect the carbon market are more analogous to the commodities market, weather events, force majeure, interruptions in shipping patterns, these kinds of things.

It means I can't deliver the guava from

Samoa on the date I had to, so now I've got to go out and buy guava or pay you. I think that is what distinguishes it, at least in the most rudimentary fashion, from what we are talking about now because when you register perspective projects, as a project developer, you want to sell something you haven't done yet because you get the use of the asset ahead of time to insure that it happens. If you don't deliver when you say it is going to happen, you know, you bear the financial responsibility as is set forth in the contract.

That is how I would break these down. You know they are temporal.

MS. WITTENBERG: Yeah, okay.

MODERATOR BROWN: Are we running out of ideas?

MR. PROLMAN: I think we are ready buy/sell trading, we just need two participants.

MR. WICKIZER: Need both the sellers anyway.

MODERATOR BROWN: Thoughts, observations?

MR. JONES: I'm really glad I came because I can't talk about this at home, my wife won't let me.

MR. PROLMAN: That's a common problem.

MODERATOR BROWN: What do you do with your spare time?

MR. JONES: Well, I play golf, but the lights go off when I start talking about carbon after about 30 seconds at the dinner table. Oh, Dad.

MS. PASSERO: You are not alone.

MODERATOR BROWN: I learned a lot today, and I thank everyone for the discussion. It has been fascinating, and it makes it concrete, more concrete than it was before.

MS. PASSERO: I think other feedback -- I know there will be written feedback on a lot of the specifics of the protocols, but even just more general, user friendly-type comments on how the documents actually read and the formats are also really helpful.

MS. WITTENBERG: Diane Wittenberg. I just echo that this has been a helpful process, and I thought everybody who came to the table this morning and this afternoon were really trying to move the ball forward, and we appreciate that sort of teamwork attitude because we are trying to make something new together that is good.

MODERATOR BROWN: Director Tuttle, do you have closing remarks?

MS. TUTTLE: I can't believe we have come this far. It is really a thrill for me to listen to this conversation and to see how far we have gotten. No, we are not entirely there, but man, we are way ahead of a lot of other people. On this question on baseline, and this set forest practice rules, as much as some folks who don't really understand what is in here may say this is a very fine level to start from, and if we can raise the rest of the world up to these standards by virtue of our setting this as a starting point for us -- I'm pointing to the Forest Practice Rule book here for those on line -- I think that will be a real step forward for global forestry and global forest practices as well.

MODERATOR BROWN: Suzie, any comments from you?

MS. GREENHAUGH: No, I think I've had my beef today thanks.

MODERATOR BROWN: I think if there is nothing more, I think we are ready to conclude this workshop, and thank everyone for coming, and we look forward to written comments by June 3.

(Whereupon, at 2:38 p.m., the workshop was adjourned.)

CERTIFICATE OF REPORTER

I, ALAN MEADE, an Electronic Reporter, do hereby certify that I am a disinterested person herein; that I recorded the foregoing California Energy Commission Workshop; that it was thereafter transcribed into typewriting.

I further certify that I am not of counsel or attorney for any of the parties to said workshop, nor in any way interested in outcome of said workshop.

IN WITNESS WHEREOF, I have hereunto set my hand this 27th day of May, 2004.

ALAN MEADE